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

February 25, 2020

Mr. David Maloney, SHPO
Historic Preservation Office
1100 4th Street, SW, Suite 650 East
Washington, DC 20024

Dear Mr. Maloney:

Subject: Federal Aviation Administration (FAA) Proposal to Publish Amended Air Traffic Procedures at Reagan National Airport – Amended waypoint of nine northbound Departure Procedures

The Federal Aviation Administration (FAA) is conducting an environmental review to consider the potential environmental impacts for the amendment of a waypoint used by nine departure procedures serving Ronald Reagan Washington National Airport (DCA) in Arlington County, Virginia (Proposed Action). The FAA has determined that the Proposed Action is an undertaking subject to Section 106 of the National Historic Preservation Act of 1966 (NHPA) (16 U.S.C. § 470 et seq.) and its implementing regulations at 35 C.F.R. Part 800. This letter presents the FAA's review of whether the project has an Area of Potential Effects and the FAA's determination that no historic properties would be affected by the undertaking, pursuant to 36 C.F.R. 800.4(d)(1). Information supporting this finding, including a description of the undertaking and the FAA's review of whether this project will affect historic properties and other information required by 36 C.F.R. 800.11(d) is contained within this correspondence.

The FAA respectfully requests your review of the information listed in this document and seeks your concurrence with our determination that the amended waypoint to departure procedures at DCA would not affect historic properties. As explained in greater detail below, the FAA has not designated an Area of Potential Effect (APE) because, as demonstrated by Figure 2, the Proposed Action is not expected to expand the flight corridor flown by current aircraft. As a result, the Proposed Action will not introduce any visual, atmospheric, or audible elements to new areas. In addition, the FAA's noise screen for the Proposed Action, enclosed with this letter, concludes that the Proposed Action will not cause any reportable[1] or significant[2] noise impacts. Refer to **Attachment A** to review the Noise Screening Report.

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[1] Under FAA policy, 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, is significant. FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, Exhibit 4-1. DNL is the 24-hour average sound level, in decibels, for the period from midnight to midnight, obtained after the addition of ten decibels to sound levels for the periods between midnight and 7 a.m., and between 10 p.m., and midnight, local time.

[2] Under FAA policy, noise increases are "reportable" if the DNL increases by 5 dB or more within areas exposed to DNL 45-60 dB, or by 3 dB or more within areas exposed to DNL 60-65 dB. FAA Order 1050.1F, Appendix B, section B-1.4.

Project Description

On January 30, 2020, the FAA began conducting a temporary air traffic test to move a waypoint, ADAXE, 784 feet to the southwest, and rename that waypoint REVGE as part of the publication of a new departure procedure called HOLTB. **Note: Departure procedures such as HOLTB are a series of waypoints that aircraft fly by in order to route aircraft in a safe and efficient manner.** The temporary procedure has been used by approximately ten percent of north-flow departures at DCA since its implementation, which allows the FAA to compare the impact of using waypoint ADAXE to waypoint REVGE.

The purpose of the temporary HOLTB procedure and the FAA's Proposed Action is to enhance national security. The Proposed Action was developed because of a longstanding concern from the United States Secret Service caused by airlines penetrating the Prohibited Area P-56, which protects a portion of the National Mall in Washington, D.C. and the White House. Since 2012, over 300 incursions have occurred, which resulted in the U.S. Secret Service requesting that the FAA Administrator identify and implement changes for aircraft operating out of DCA to reduce aircraft violations of the Prohibited Area P-56. **Attachment B** contains a copy of the letter from the U.S. Secret Service to the FAA. In consultation with the Secret Service, the FAA identified amending the REVGE waypoint as a way to move aircraft away from P-56 while still flying over the Potomac River, which is consistent with longstanding community requests to manage aircraft noise from DCA. The FAA's Aviation Environmental Screening Tool (AEDT) was used to conduct noise screening to evaluate whether there would be noise impacts as a result of implementing the amended waypoint for all north-flow departure procedures at DCA. The results of the modeling, contained in Attachment A, indicated that there would be no reportable or significant noise impacts.

As noted above, the FAA published the temporary HOLTB procedure on January 30, 2020, to temporarily evaluate the effectiveness of the REVGE amendment and to ensure pilots and their planes could fly the procedure as designed by the FAA. **Figure 1** contains a depiction of the proposed amended procedure. Based on the initial results of the HOLTB, which indicates the amended waypoint meets the purpose and need of reducing incursions into P-56, the FAA is proposing to permanently implement the HOLTB as well as amend the remaining existing north-flow departure procedures at DCA so that all aircraft follow the new REVGE waypoint. Indeed, Figure 2 demonstrates that the use of the REVGE waypoint moves aircraft away from P-56 while still keeping them within the current corridor of flight tracks from aircraft using the ADAXE waypoint. As a result, the FAA is not introducing aircraft into any new areas, and aircraft will continue to fly over the Potomac River. As part of the FAA's environmental review for the Proposed Action, the FAA is engaging with your office pursuant to Section 106 of the National Historic Preservation Act.

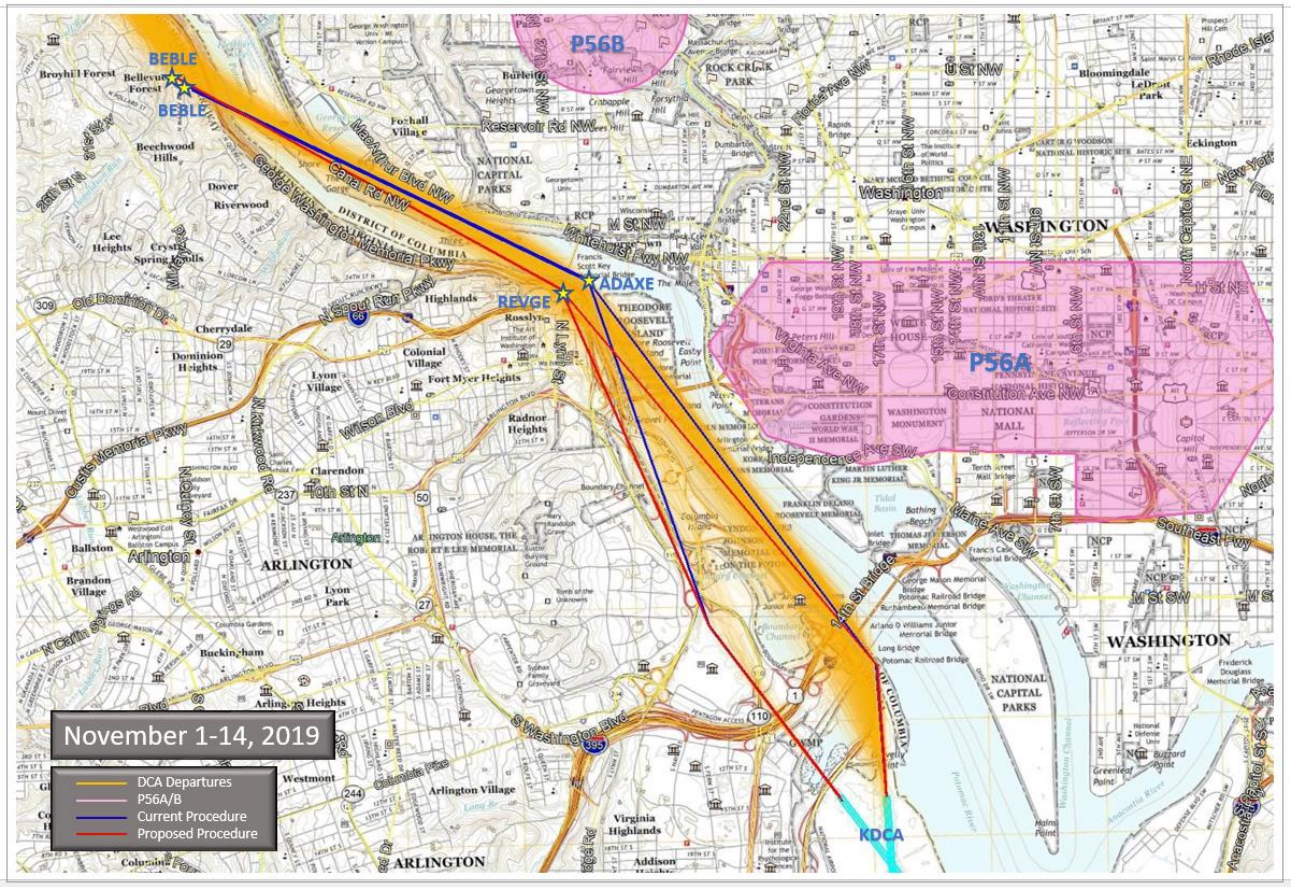

Figure 1. Original and proposed amended procedure, original procedure (blue lines) and proposed procedure (red lines). The orange shading represents radar tracks depicting aircraft location from November 1-14, 2019.

Area of Potential Effects

As part of its responsibilities under Section 106, the FAA attempted to identify the Area of Potential Effects 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." 36 CFR § 800.16(d).

The Proposed Action will not cause any physical effects. However, pursuant to 36 CFR 800.5(a)(2)(v), the FAA also considered 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 compared the flight tracks of aircraft flying the REVGE waypoint to those still using the ADAXE waypoint. The comparison is depicted in Figure 2. Based on this comparison, the FAA determined that there would be no new areas overflown by the Proposed Action, and therefore no potential to introduce new visual, atmospheric or audible elements.

The FAA also considered the potential for the undertaking to have noise effects that could alter the character or use of historic properties. The FAA conducted a noise screen to determine how this undertaking would affect current aircraft noise exposure levels. This analysis indicated that the undertaking would not result in any noise increase that would be "significant" or "reportable" as defined in FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*.

In sum, after careful evaluation of aircraft radar tracks for the proposed action compared to the no action alternative, the FAA determined that the outer boundaries of the flight corridor did not expand when aircraft used the new REVGE waypoint. Refer to **Figure 2** to view the comparison of radar flight tracks from February 6-11, 2020. Additionally, the FAA's noise screening tool AEDT did not indicate any measurable change in noise level (no reportable or significant noise increase). Refer to **Attachment A** to review the AEDT noise screening analysis report. Based on the FAA's determination that this undertaking does not have an Area of Potential Effects, the FAA is proposing a finding of no historic properties affected, pursuant to 36 CFR 800.4(d)(1).

KDCA All Departures – Feb 6 – Feb11, 2020 – 2356 Tracks

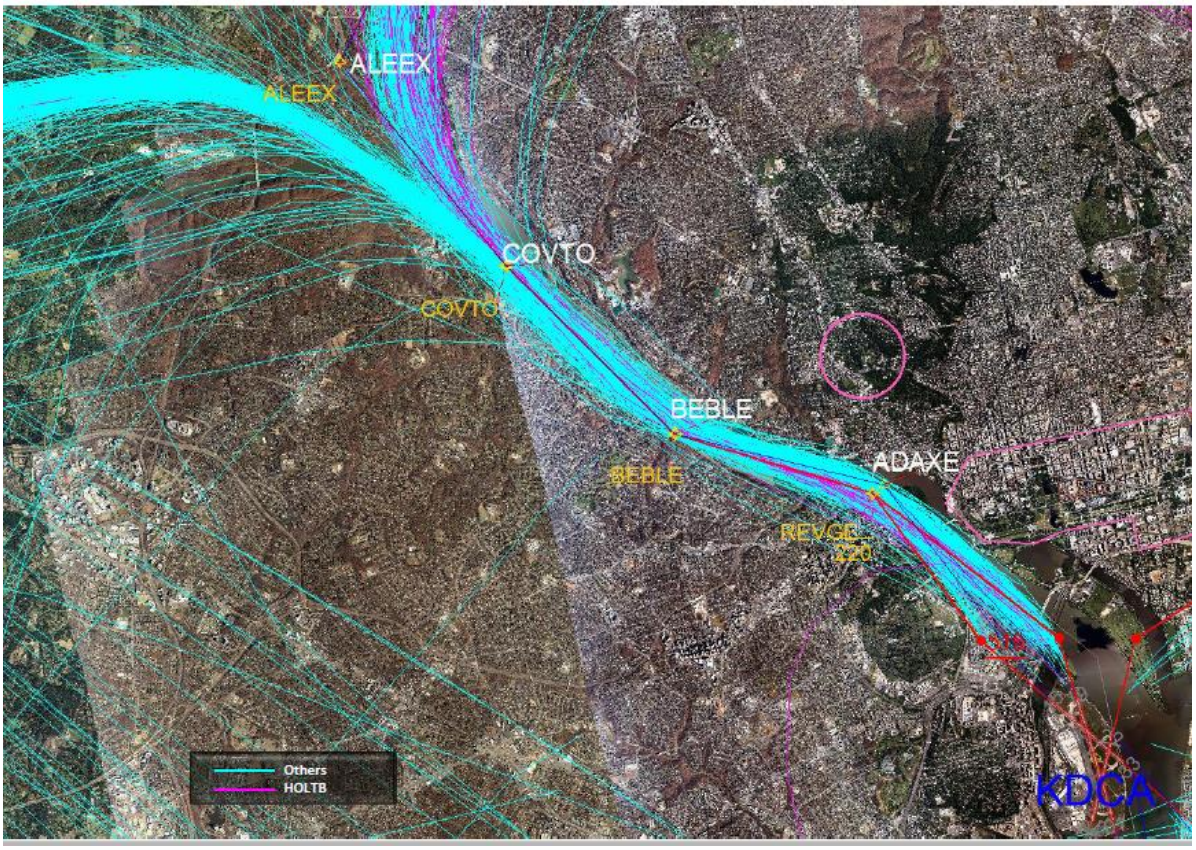

Figure 2. No action alternative flight radar tracks (light blue) versus the proposed action flight radar tracks (magenta) for the period February 6 - February 11, 2020.

<u>Request for Concurrence</u>

The FAA requests your review of the information listed within this document, and we seek your concurrence with the FAA's finding pursuant to 36 CFR 800.4(d)(1) that no historic properties would be affected by the amended waypoint to north-flow departure procedures at DCA. As set forth in 36 CFR 800.4(d)(1)(i), any objections must be filed within 30 days receipt of the FAA's finding. If you desire to provide comments or objections, please provide them by letter or email within 30 days to the undersigned at the following address:

Andy Pieroni, Environmental Protection Specialist
Eastern Service Center - Operations Support Group, AJV-E250
1701 Columbia Avenue
College Park, GA 30337
(404) 305-5586 (tel)
(404)-305-5572 (fax)
E-mail address for questions: andrew.pieroni@faa.gov

The FAA would like to thank you for your interest in this project. If you have any questions about the information provided, please feel free to contact me at 404-305-5571.

Sincerely,

Charles J Gibson
For
Ryan Almasy
Manager, Operations Support Group, AJV-E200
Eastern Service Center
Federal Aviation Administration

ATTACHMENTS

Attachment A: Noise Screening Report

Noise Screening Analysis Report

For

Ronald Reagan Washington National Airport

KDCA

Washington, DC

Prepared by:

ATO, AJV-114, Environmental Policy Team

Friday, February 21, 2020

This Noise Screening Report was prepared by the FAA to assess noise exposure from the proposed project under consideration. Even though the data and results contained in the report are accurate, the report is a preliminary document, potentially subject to revision, until the FAA makes a final environmental decision related to the proposed project.

Summary

Noise analysis was completed to assess potential impacts resulting from proposed air traffic actions at Ronald Reagan Washington National Airport (DCA) in Washington, DC, using the Terminal Area Route Generation, Evaluation, and Traffic Simulation (TARGETS) Environmental Plug-in tool and the Aviation Environmental Design Tool (AEDT).

Historical radar track data was used to create a baseline scenario. After the baseline scenario was built, aircraft operations assigned to the proposed procedure were modeled as flying the proposed procedure, which provides the alternative scenario. Selections for track assignments were made based on historical flight paths, and RNAV capable aircraft were assigned to the procedure nearest to their historical tracks in the alternative scenario.

Once the baseline and alternative scenarios were built, the TARGETS Environmental Plug-in Tool was used to generate noise outputs for both scenarios. In the case of DCA, there was no significant or reportable increase in noise resulting from the proposed action.

This Noise Screening Report was prepared by the FAA to assess noise exposure from the proposed project under consideration. Even though the data and results contained in the report are accurate, the report is a preliminary document, potentially subject to revision, until the FAA makes a final environmental decision related to the proposed project.

Purpose

The purpose of this report is to document the process used to analyze the noise impact of proposed air traffic actions at Ronald Reagan Washington National Airport (DCA) in Washington, DC and to present the results of that analysis. The analysis of the instrument flight procedures at DCA was performed using the Terminal Area Route Generation, Evaluation, and Traffic Simulation (TARGETS) Environmental Plug-in tool and the Aviation Environmental Design Tool (AEDT).

Figure 1 shows the airport diagram for DCA, which provides the runway layout and the airport's field elevation. Table 1 shows the procedure name, type and publication date.

Table 1: Proposed Procedures Modeled for DCA

Procedure Name	Procedure Type
AMEEE ONE	RNAV SID
CLTCH TWO	RNAV SID
DOCTR FIVE	RNAV SID
HORTO THREE	RNAV SID
JDUBB TWO	RNAV SID
REBLL FOUR	RNAV SID
SCRAM FOUR	RNAV SID
SOOKI FIVE	RNAV SID
WYNGS FOUR	RNAV SID

This Noise Screening Report was prepared by the FAA to assess noise exposure from the proposed project under consideration. Even though the data and results contained in the report are accurate, the report is a preliminary document, potentially subject to revision, until the FAA makes a final environmental decision related to the proposed project.

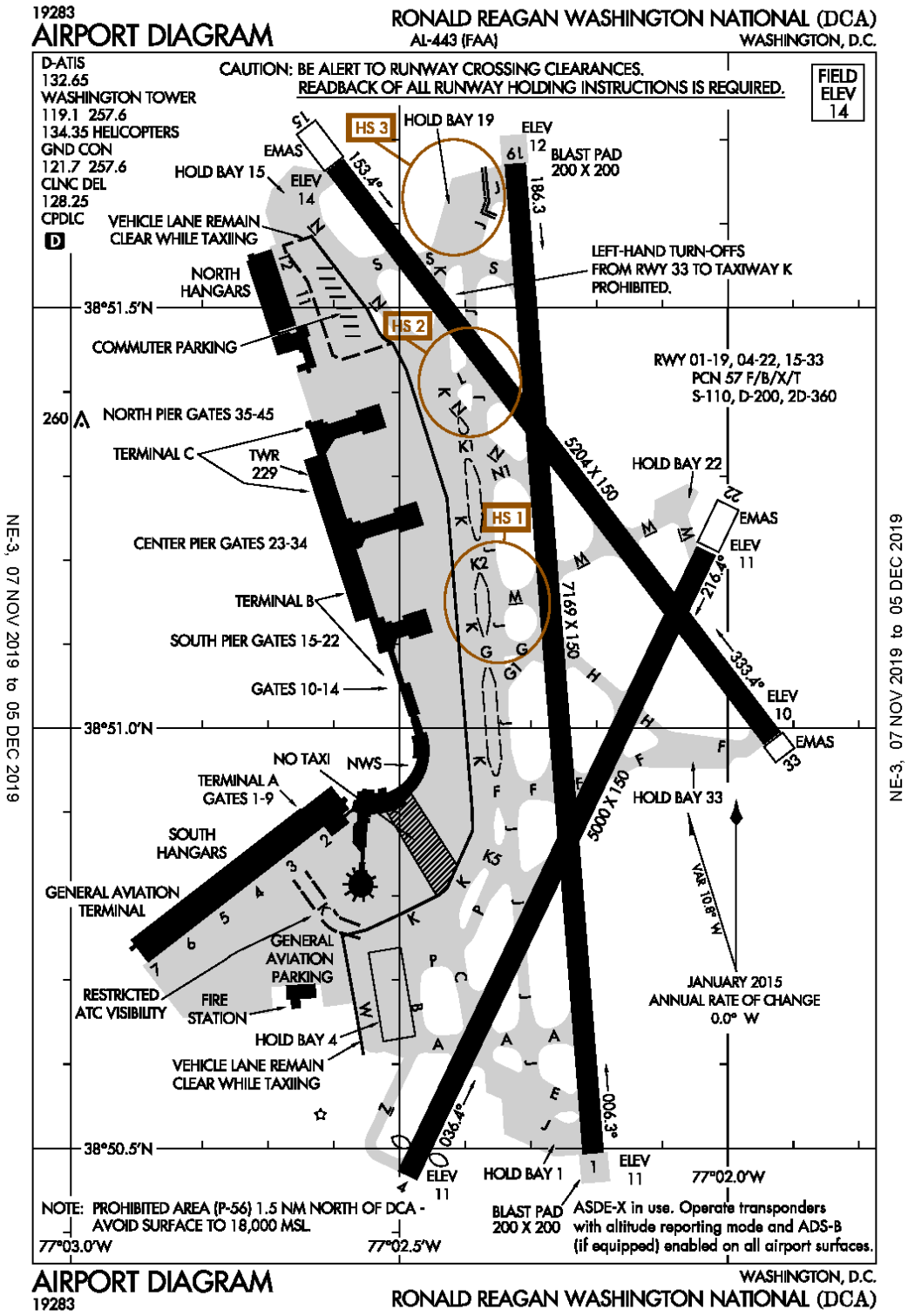

Figure 1: Airport Diagram of DCA

This Noise Screening Report was prepared by the FAA to assess noise exposure from the proposed project under consideration. Even though the data and results contained in the report are accurate, the report is a preliminary document, potentially subject to revision, until the FAA makes a final environmental decision related to the proposed project.

Methods

Noise screening was completed using the TARGETS Environmental Plug-in tool to calculate Day-Night Average Sound Levels (DNL) from existing operations (baseline) and modeled operations to replicate the proposed action (alternative). Historical radar track data for DCA was obtained from the Performance Data Analysis and Reporting System (PDARS). After concurrence of the dates to be used by the environmental specialist and air traffic facility, 60 days of random radar track data were selected for the DCA analysis representing a range of temperature and wind conditions as well as being representative of the average runway usage. A list of the tracks selected for analysis are shown in Appendix A.

After the removal of overflights, incomplete track segments, and other unusable tracks, 24,743 tracks were used for the analysis. The altitude of the historical tracks was considered and a range ring was set to contain the area where most of the tracks reached above 10,000 feet Above Field Elevation (AFE). This established the study area and the tracks outside of the study area were removed from the analysis. In the case of DCA, the study area is a circle with a radius of 40 nautical miles (nm) centered over the airport.

The randomly selected dates are presumed to represent average traffic counts and traffic flows through various seasons and peak travel times for DCA. There were no significant runway outages or significant conditions that would otherwise result in abnormal traffic counts or traffic flows. In order to calculate the Average Annual Day (AAD) impacts, traffic counts for average daily departures and arrivals used for annualization in this analysis were obtained through the FAA's AFS Data Analytics Runway Usage Module.

Historical radar track data was used to create a baseline noise exposure, which provides lateral path definition, aircraft fleet mix, departure/arrival stream proportions for each runway, and day/night traffic ratios. The alternative scenario was built by taking aircraft operations and assigning them to the proposed procedure instead of their historical tracks. RNAV capable aircraft were assigned to the procedure based on their historical tracks, proximity to other procedures, and any additional usage information from the Environmental Specialist. In the case of DCA, all operations departing from runways 01 and 03 were assigned to a proposed procedure.

The analysis does not take into account terrain. All calculations were made in reference to the airport's field elevation. The altitude controls were based on AEDT standard aircraft profiles. With respect to lateral distribution, a 0.5 nm dispersion for RNAV procedures was used and a 0.3 nm dispersion for RNP procedures was used based standard methods for noise screening. For tracks near the runway where dispersion is normally less than 0.3 nm, dispersion was based on historical track data.

Once the baseline and alternative scenarios were built, the TARGETS Environmental Plug-in Tool was used to generate noise outputs for both scenarios. The Environmental Plug-in Tool uses the Aviation Environmental Design Tool to calculate noise. The noise output files from AEDT for both the baseline and alternative noise exposures consist of a series of equally spaced grid points, each showing the DNL value. The noise grid (receptor set) is a square grid extending 30 nm in each direction of the airport with grid points (receptors) spaced 0.25 nm apart. The noise results of the baseline and alternative scenarios were then compared to test for potential noise impacts.

The noise impact is a comparison between the baseline and the alternative noise exposure that depicts reportable and significant noise changes at all affected locations per the criteria indicated in FAA Order 1050.1F and Chapter 32 of FAA Order 7400.2K. The reportable and significant noise increases and decreases (if any) are then depicted on an aerial map.

This Noise Screening Report was prepared by the FAA to assess noise exposure from the proposed project under consideration. Even though the data and results contained in the report are accurate, the report is a preliminary document, potentially subject to revision, until the FAA makes a final environmental decision related to the proposed project.

Results

1. Noise Exposure

The baseline and alternative noise exposure is shown in Figure 3-1 and Figure 3-2, which depicts the levels and locations of the noise produced by the historical radar track data for arrivals and departures.

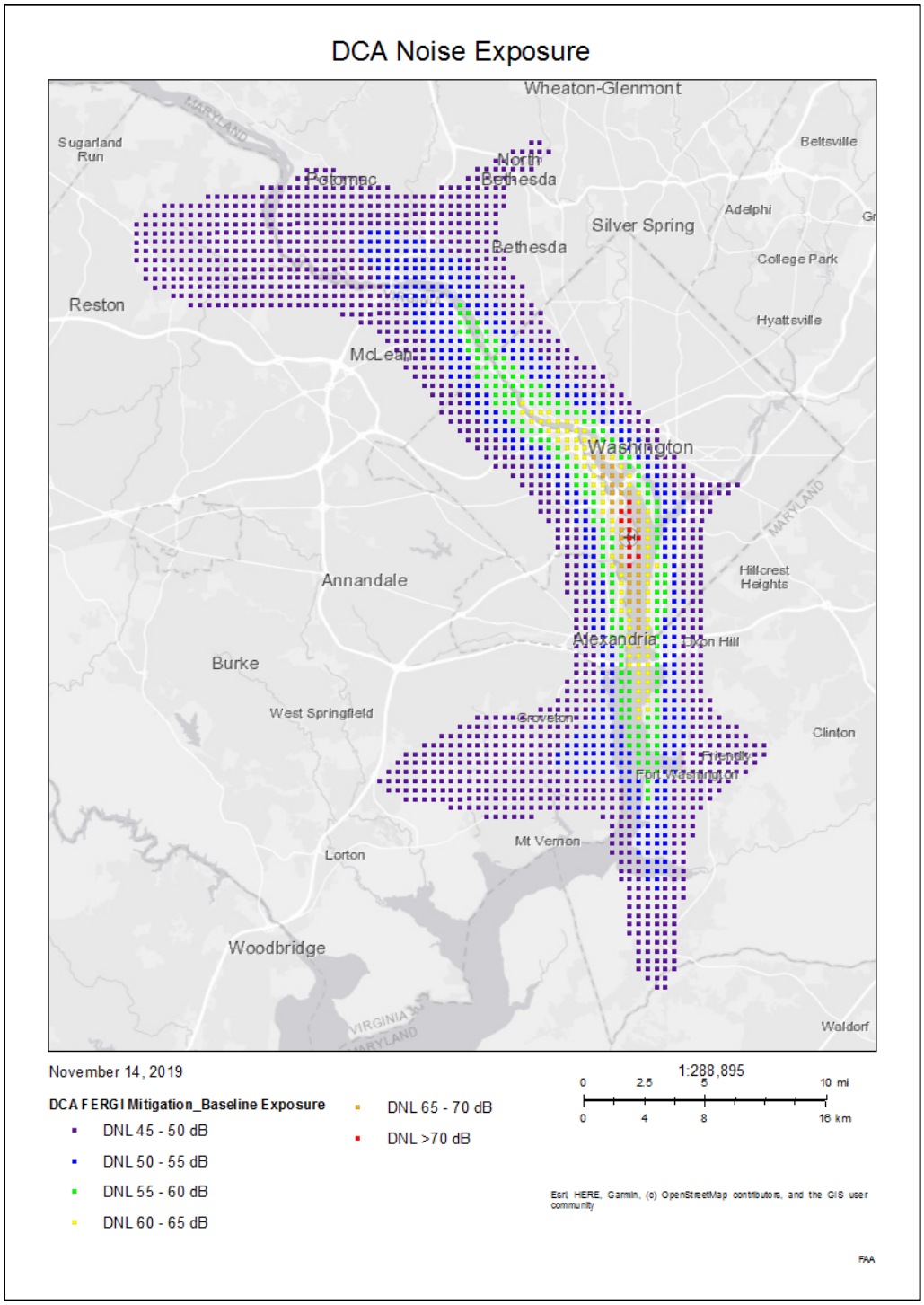

Figure 3-1: Baseline Noise Exposure in TARGETS

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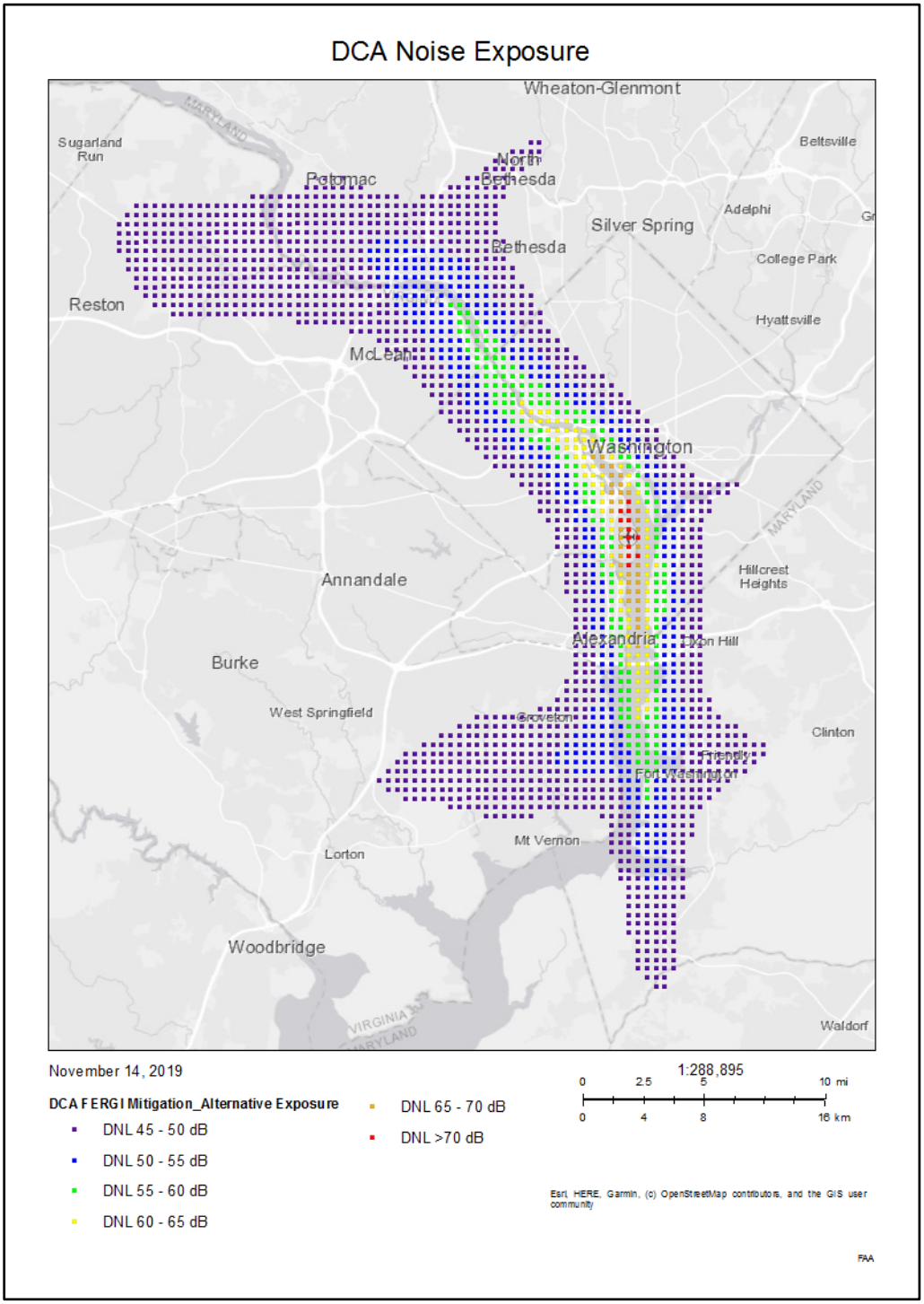

Figure 3-2: Alternative Noise Exposure for the Proposed Procedures in TARGETS

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2. Noise Impacts

A comparison of the baseline and alternative scenarios by the TARGETS Environmental plug-in determines the noise impacts of the proposed action. Significance of noise impacts is defined by FAA Order 1050.1F[1] which establishes the threshold for significant increases in noise exposure. Where the proposed action results in a noise impact, TARGETS graphically displays a noise impact layer that indicates the locations of reportable and significant changes. When applicable, these impacts are shown overlaying a map view of the area surrounding the airport. In the case of DCA, there was **no reportable or significant increase in noise resulting from the proposed action.**

[1] According to Exhibit 4-1 of FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, a noise impact is significant if *"The action would increase noise by DNL 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 due to a DNL 1.5 dB or greater increase, when compared to the no action alternative for the same timeframe."*

This Noise Screening Report was prepared by the FAA to assess noise exposure from the proposed project under consideration. Even though the data and results contained in the report are accurate, the report is a preliminary document, potentially subject to revision, until the FAA makes a final environmental decision related to the proposed project.

Appendix A Random Tracks Used for Analysis

1	7/9/2018
2	7/21/2018
3	7/23/2018
4	7/24/2018
5	7/26/2018
6	8/1/2018
7	8/5/2018
8	8/18/2018
9	8/20/2018
10	8/27/2018
11	8/29/2018
12	8/30/2018
13	9/1/2018
14	9/9/2018
15	9/11/2018
16	9/19/2018
17	10/8/2018
18	10/9/2018
19	10/14/2018
20	10/16/2018
21	10/17/2018
22	10/19/2018
23	10/21/2018
24	10/31/2018
25	11/7/2018
26	11/12/2018
27	12/1/2018
28	12/4/2018
29	12/7/2018
30	12/11/2018

31	12/12/2018
32	12/13/2018
33	12/18/2018
34	12/23/2018
35	12/27/2018
36	12/31/2018
37	1/3/2019
38	1/28/2019
39	1/30/2019
40	2/4/2019
41	2/5/2019
42	2/6/2019
43	2/8/2019
44	2/15/2019
45	2/18/2019
46	2/25/2019
47	3/9/2019
48	3/12/2019
49	3/20/2019
50	3/26/2019
51	3/27/2019
52	3/28/2019
53	4/25/2019
54	4/26/2019
55	4/27/2019
56	5/1/2019
57	5/3/2019
58	5/6/2019
59	5/23/2019
60	5/28/2019

This Noise Screening Report was prepared by the FAA to assess noise exposure from the proposed project under consideration. Even though the data and results contained in the report are accurate, the report is a preliminary document, potentially subject to revision, until the FAA makes a final environmental decision related to the proposed project.

Attachment B: Letter from US Secret Service to the FAA Requesting New Flight Procedures

U.S. Department of Homeland Security
UNITED STATES SECRET SERVICE
Washington, D.C. 20223

DIRECTOR

August 15, 2018

Mr. Daniel K. Elwell
Acting Administrator
U.S. Department of Transportation
Federal Aviation Administration
800 Independence Avenue, SW
Washington, D.C. 20591

Dear Mr. Elwell:

I am writing you to discuss flight incursions into the Prohibited Area P-56, District of Columbia. The proximity of Ronald Reagan Washington National Airport (KDCA) to the White House and Naval Observatory, creates a significant security risk for the U.S. Secret Service (Secret Service). Pursuant to Title 18, Section 3056, of the United States Code, the Secret Service is responsible for implementing appropriate security procedures for the President, Vice President, and visiting heads of state. In accordance with these responsibilities, the Secret Service must ensure the security of the airspace above the White House and the Naval Observatory, both of which fall within the Prohibited Area P-56. Over the past few years the Secret Service has observed an increase in flight violations into the Prohibited Area P-56 from aircraft departing and arriving KDCA, resulting in an annual incursion increase of approximately thirty percent. The increased numbers of aircraft violating the Prohibited Area P-56 has caused great concern for the Secret Service.

Pursuant to 14 CFR Part 73 [Airspace Docket No. 98-AWA-4] Change of Using Agency for Prohibited Area P-56, from the Administrator of the Federal Aviation Administration to the Secret Service, I would respectfully request that the Federal Aviation Administration identify and implement new procedures for aircraft operating out of KDCA. The objective of the Secret Service, regarding this request, is to reduce and ultimately eliminate aircraft violations of the Prohibited Area P-56. Each incursion provokes a significant coordinated response from the Department of Defense and numerous federal agencies, including the Secret Service, causing the expenditure of valuable resources while also affecting commercial and other air traffic in the National Capital Region. Additionally, this request will reduce the exposure to potential liability which commercial airlines, air charter companies, and individual pilots face for each incursion.

Thank you for any assistance you can provide with this request. Should you wish to discuss this matter further, please do not hesitate to contact Deputy Assistant Director, Special Operations, James Lewis on 202-406-5452.

Sincerely,

Randolph D. "Tex" Alles