

FEDERAL AVIATION ADMINISTRATION

RECORD OF APPROVAL (SUPPLEMENT)

14 CFR PART 150 NOISE COMPATIBILITY PROGRAM

NEWARK LIBERTY INTERNATIONAL AIRPORT

NEWARK, NEW JERSEY

JACK F
WILLIAMS

Digitally signed by
JACK F WILLIAMS
Date: 2023.08.14
15:45:27 -04'00'

Manager, Environmental Branch, AGC-630
Office of the Chief Counsel

Date

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CONCUR

NONCONCUR

DAVID A FISH

Digitally signed by DAVID A FISH
Date: 2023.08.14 16:05:20 -04'00'

Manager, Airports Division, AEA-600

Date

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APPROVED

DISAPPROVED

RECORD OF APPROVAL (SUPPLEMENT)
NEWARK LIBERTY INTERNATIONAL AIRPORT
NOISE COMPATIBILITY PROGRAM

INTRODUCTION

The Newark Liberty International Airport (EWR), Newark, New Jersey, Noise Compatibility Program (NCP) describes the current and future non-compatible land uses based upon the parameters established in Title 14 of the Code of Federal Regulations, Part 150, *Airport Noise Compatibility Planning*. Preparation of this Part 150 Study was initiated by the Port Authority of New York and New Jersey (Port Authority), the airport sponsor, in 2014. EWR submitted their Noise Exposure Maps (NEM) for the period 2019 through 2024. The FAA determined that the NEMs were prepared in accordance with procedures contained in Title 14, Code of Federal Regulations (CFR), Part 150 and accepted the maps on January 15, 2019. The EWR NCP measures were developed subsequent to the initial submission of NEMs for review and approval by FAA. The program evaluated a total of 46 measures and recommends a total of 28 measures to prevent the introduction of additional non-compatible land uses and to reduce the effect of the noise generated at the airport. The recommendations included 13 noise abatement measures, three land use management measures, and 12 program management measures. The recommended measures are summarized in Section 2 (Noise Abatement Measures), Section 3 (Land Use Management Measures), and Section 4 (Program Management Measures) and Appendices C, G, and H of the NCP. More detailed descriptions and additional information on each measure can be found in Section 2.2 (Noise Abatement Measures); Sections 3.2 and 3.3 (Land Use Management Measures); and Section 4.2 (Program Management Measures) of the NCP.

The FAA issued a Record of Approval for the EWR NCP on February 15, 2023, in which two of the 13 recommended Noise Abatement measures, all three Land Use measures, and all 12 Program Management measures were approved. Two of the Noise Abatement Measures were partially approved and partially disapproved, five were disapproved, and one was found to have no FAA action as a continuation of existing practice at EWR. The other three Noise Abatement Measures (Measures 2, 4, and 12) were identified as requiring additional review in consultation with the FAA's Air Traffic Organization with a Supplemental ROA to be issued on or before August 14, 2023 to render determinations on these measures. This Supplemental ROA meets this previously established commitment.

Following issuance of the ROA on February 15, 2023, the Port Authority requested that the FAA revisit the decision for Noise Abatement Measure 6, indicating that the rationale for disapproval originally provided contained an error. The ROA stated that "Documentation provided in support of this measure by the Port Authority did not include analysis comparing implementation of the measure to the accepted NEM for EWR, rather it included a comparative analysis of implementation of potential NADP 1 and NADP 2 procedures at EWR." After review, the FAA determined that this was an oversight due to a differing approach in analysis used at EWR in comparison to that done for the recently-approved NCP

for LaGuardia Airport and that the EWR NCP documentation did include the required analysis. This Supplemental ROA also includes a revised decision on this measure.

FAA approval discussed herein is for the approval of measures the Port Authority recommends taking and this approval only indicates the recommended measures would, if implemented, be consistent with the purposes of 14 CFR Part 150. FAA approval does not constitute decisions to implement the measures nor does it constitute a commitment by the FAA to provide financial assistance to the Port Authority for the recommended measures. In addition, later decisions concerning possible implementation of the recommended measures may be subject to environmental protection laws and regulations or other procedures or requirements, as applicable.

The measures are identified below by program element and referenced to the NCP by page number. Each program element summarizes as closely as possible the airport operator's recommendations as found in the NCP. The statements contained within the summarized recommendations and before the indicated FAA approval, disapproval, or other determinations do not represent the opinions or decisions of the FAA. This Supplemental ROA pertains to the listed measures only, and does not change the decisions made by the FAA in the ROA for the NCP dated February 15, 2023 for the measures not contained within this Supplemental ROA.

NOISE ABATEMENT MEASURES (NCP Section 2)

2. Continue Use of Easterly Departure Headings on Runways 4L and 4R (Page 2-17)

Description: An existing noise abatement measure in place at EWR since the 1980s directs aircraft departing on Runways 4L and 4R to turn east, to a heading of 60°, upon reaching a safe altitude, in order to avoid non-compatible areas of the Ironbound Neighborhood in Newark. The 60° heading for aircraft departing Runways 4L and 4R directs aircraft to fly over a compatible industrial area. This measure would maintain the easterly departure headings as a noise abatement measure for aircraft departing Runways 4L and 4R to avoid overflying the Ironbound Neighborhood of Newark. The public has requested, through public comments to the draft EWR NEM, that flight tracks be positioned over compatible land use. This measure is consistent with such public requests.

FAA Action: DISAPPROVED. Facility review of EWR procedures identified confliction between EWR 4L/R missed approaches and LGA airspace. The missed approach procedures were amended 6/15/2023. As a result of the amendments to the EWR 4L/R missed approach procedures, the 4L/R departure procedure (NEWARK FOUR) is being amended on 11/30/2023 to ensure minimum standard separation between aircraft executing a missed approach and departures from the adjacent runway. NEWARK FOUR is being amended to change the heading of departing aircraft from 60° to 55°, which provides 15 degrees of separation between aircraft conducting a missed approach and departing aircraft in accordance with the FAA separation criteria standards for passing aircraft established by FAA Order 7110.65AA, *Air Traffic Control*. The new published departure procedure will be named NEWARK FIVE and once published, the requested continuation of the 060 heading will not be possible at that point. This measure is accordingly

disapproved as implementation of this measure would not meet necessary approval criteria established by 14 CFR Part 150.35(b)(3)(ii) and (iii).

4. Determine and Implement Optimal Easterly Departure Headings on Runways 4L and 4R (Page 2-29)

Description: Turning Runways 4L and 4R departing aircraft to an easterly heading of 60° is shown to be effective in reducing non-compatible land use (see Noise Abatement Measure 2). The Port Authority analyzed the potential noise benefit of increasing the turn after departure on Runways 4L and 4R to more easterly headings. The analysis indicated that the greater the turn to an easterly heading (e.g. 65- or 70°), the fewer people exposed to noise in the 65 DNL and higher contours. The FAA has noted during development of the measure that there is a limit to how far east aircraft can be directed before they conflict with LGA traffic because the LGA airspace is to the east of EWR. This measure is proposing that the FAA continue to work to determine the easternmost heading they can safely direct aircraft without conflicting with LGA traffic. The results of this additional analysis will lead to the identification of the optimal easterly heading for aircraft departing Runway 4L and 4R for noise abatement purposes.

FAA Action: FAA Action: DISAPPROVED. The requested examination of increasing the 060 heading is not possible. The current 4L/R departure procedure (NEWARK FOUR) is being amended on 11/30/2023 to ensure minimum standard separation between aircraft executing a missed approach and departures from the adjacent runway. NEWARK FOUR is being amended to change the heading of departing aircraft from 60° to 55°. This will establish procedural separation of 15 degrees between aircraft conducting a missed approach and departing aircraft in accordance with the FAA separation criteria standards for passing aircraft established by FAA Order 7110.65AA, *Air Traffic Control*. Procedural separation is beneficial because in the event of lost communications, aircraft will fly tracks that ensure a legal and safe level of separation until communications with air traffic control can be reestablished. The new published departure procedure will be named NEWARK FIVE and once published, more easterly headings will not be available for departures. This measure is accordingly disapproved as implementation of this measure would not meet necessary approval criteria established by 14 CFR Part 150.35(b)(3)(ii) and (iii).

6. Encourage Use of FAA-prescribed Distant Noise Abatement Departure Profile Procedures on a Voluntary Basis (Page 2-33)

Description: This NCP measure involves the voluntary implementation of noise abatement departure profiles (NADPs), which are aircraft climb-out profiles that can provide noise reduction benefits. In 1993, the FAA published acceptable criteria for two safe NADPs for commercial jet aircraft: the close-in NADP, also known as NADP1, and the distant NADP, also known as NADP2 (FAA Advisory Circular [AC] 91-53A). The close-in NADP provides noise reduction benefits to areas adjacent to an airport, whereas the distant NADP provides noise reduction benefits farther from an airport.

Figure 2-6 (Page 2-34) gives a general, comparative overview of both types of NADP. The NADPs outline criteria for speed, thrust settings, and airplane configurations used in connection with each NADP. The designs of NADPs and their frequencies of use are specific to individual aircraft operators and aircraft types. Airport operators cannot mandate the use of NADPs at an airport because airport operators do not

have the authority to require specific operating profiles for aircraft in flight. Implementation of NADPs is voluntary and at the choice of aircraft operators; however, FAA AC 91-53A encourages aircraft operators “to use the appropriate NADP when an airport operator requests its use to abate noise for either a close-in or distant community.”

FAA Action: PARTIALLY APPROVED AS VOLUNTARY AND PARTIALLY DISAPPROVED FOR PURPOSES OF PART 150. Analysis contained within the NCP (Text, page 2-33 and Tables 2-15 and 2-16 on page 2-39) include analytical results of potential NADP1 and NADP2 implementation at EWR. The documentation demonstrates that implementation of NADP1 could increase the number of residential units within the day-night average sound level (DNL) 65 decibel (dB) contour by 436 and that implementation of NADP2 could reduce the number of residential units within the DNL 65 dB contour by 179 with 100% utilization of the respective NADPs. Further, one daycare facility could also be removed from the DNL 65 dB contour with full implementation of either NADP.

The analytical results for NADP1 implementation demonstrate the measure does not meet the standard for approval by the FAA, in accordance with Title 14, Code of Federal Regulations (CFR), § 150.23(e)(5) and § 150.35(a). As such, consideration of NADP1 implementation at EWR is disapproved for purposes of Part 150. The analytical results for NADP2 implementation demonstrate that the measure does meet the standard for approval. Accordingly, this measure is partially approved as voluntary, limited to consideration of NADP2 implementation. The FAA recognizes that the text of the measure includes a recommendation on behalf of the Port Authority to pursue NADP2 implementation; however, the title of the measure and analytical results are not limited only to NADP2 implementation. Therefore, the FAA has rendered decisions on both NADP1 and NADP2 for purposes of clarity.

Inclusion of these analytical results is presented as the basis upon which the decision was made, as it demonstrates that implementation of the NADP2 procedure could lead to noise reduction. Further, partial approval of this measure as voluntary does not commit the FAA or Port Authority to achieving the assumptions used for modeling as a target of implementation of the measure. Use of the procedures is subject to Air Traffic Controller discretion based on conditions in place at the time of the operation.

12. Implement Nighttime “New Jersey Turnpike” Departure Procedures for Runways 22L and 22R (Page 2-63)

Description: This measure would develop a procedure to eliminate westerly turns for all runway 22L and 22R nighttime departing aircraft until reaching an altitude of approximately 10,000 feet above airport field elevation. Figure 2-15 on page 2-65 shows notional flight tracks that could eliminate an early westerly turn for departures for Runway 22L and 22R. Implementation of such a procedure at night could reduce noise exposure to residents by directing the aircraft to continue ascending over compatible land uses along the Turnpike for an additional short distance until reaching 10,000 feet altitude before turning west to continue to their destinations. Aircraft will be at a higher altitude over residential areas because of a slightly later turn. While this could reduce throughput on the parallel runways (Runway 4L/22R and Runway 4R/22L), that would be less of an issue during the nighttime when there are fewer aircraft operations.

FAA Action: DISAPPROVED. Limiting use of procedures to achieve the intended result of this measure would cause operational conflicts for other aircraft operating in adjacent airspace sectors dedicated to LaGuardia operations, creating potential unsafe operating environments and loss of required separation. Specifically, FAA Order 7110.65, Air Traffic Control requires at least 3NM or 1000' separation between Instrument Flight Rules (IFR) aircraft. This separation standard would not be guaranteed (also known as loss of positive control) with all departures continuing on a 220° heading into airspace sectors dedicated to LaGuardia approach, which presents a safety risk to the National Airspace System (NAS) even at night. Even in situations where this safety risk is minimized due to reductions in LaGuardia operations, typically between 12:00-5:00 am, having aircraft continue on this heading until 10,000 feet altitude would prevent their proper sequencing with the balance of traffic in the National Airspace System in airspace sectors further along course. Accordingly, implementation of this measure would not meet necessary approval criteria established by 14 CFR Part 150.35(b)(3)(ii) and (iii).