NANTUCKET MEMORIAL AIRPORT COMMISSION-
ENERGY AND ENVIRONMENT SUB-COMMITTEE
June 14, 2021
Agenda

1. Convene Meeting
   Join Zoom Meeting
   https://us06web.zoom.us/j/84802920249
   Meeting ID: 848 0292 0249

2. Announcements
   a. Chair reviews virtual meeting statement
   b. This Meeting is Being Both Audio & Video Recorded

3. Noise Abatement – Ground Noise Program Elements
   a. Public Meeting Planning
   b. South Ramp Extension Operations Policy
   c. Signage, Monitoring, Other
   d. Implementation

4. Per- and polyfluoroalkyl substances (PFAS) update

5. Stormwater Inventory and Inspection Update

6. FAA Environmental Mitigation Pilot Program Grant Opportunity

Remote Participation Via Zoom and Youtube

1:00 PM

Noise Abatement Program Elements

Goal - Create good policy to inform a ground noise program. Devise strategies (not initial tactics). Example:

- Transparent (ex. Develop a written policy)
- Socially Considerate (ex. Informed by neighbors)
- Economically Viable (ex. What resources would Commission assign)
- Environmentally Consistent (ex. Define footprint and add-on effects)
- Technically Accurate (ex. Informed by data/Informs decisions)

(expect some give and take – Set Priorities)

Tactics – General notes:

- Staff prefer SMART system for accomplishing goals:
    - Specific (who/what/where/when/why)
    - Measurable (how is progress tracked)
    - Attainable & Realistic (adequate & aligned resources)
    - Time-Dependent (deadline/component deadlines)
- Existing Data Sources/Starting Points
    - Noise Complaint Database
    - APU Log
    - Duration Survey
    - South Apron Technical Noise Report
    - EA/EIR

1. Public Meeting Planning

    - What is the direction for:
        - Soliciting and integrating public comment versus managing expectations?
        - What is a proposed format (Posted meeting, integrated to existing meeting, etc)

2. South Ramp Extension Operations Policy

    - Identify Level of Document Considered (Commission Policy, Internal SOP, other?)
    - Identify Important items Policy should address (ex – noise practices, operating standards, equipment and resources, etc.)

3. Signage, Monitoring, Other

    - Prescriptive versus advisory
    - What are desired performance standards
    - Role of outside consultant?

4. Implementation

- SMART Goal Driven
- Alignment of Budget Items.

Nantucket Memorial Airport

South Apron Noise Study

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April 1, 2021

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Introduction

VHB has conducted a noise study for the proposed South Apron Extension Project. The current South Apron Extension would be approximately 1,140 feet long and 235 feet wide and extend off the west end of the existing South Apron. The proposed extension is smaller than that presented in the 2015 Nantucket Memorial Airport (ACK) Master Plan Update[1]. The primary goal of the study is to evaluate the potential changes in noise from aircraft ground operations due to the proposed South Apron extension and the noise reduction that would be provided by a potential perimeter noise barrier or earthen berm.

1.1 Background

The 2015 Master Plan recommended extending the South Apron over five phases to expand capacity of the apron, segregate different aircraft by Aircraft Design Groups[2], and to improve

[1] "Nantucket Memorial Airport Master Plan Update" Prepared by Jacobs Engineering under AIP Grant Number 3-25-033-57-2013, 2015.

[2] Group I aircraft include aircraft with wingspan less than 49 feet such as small GA single-engine piston (i.e. Cessna, Piper, and Beech). Group II aircraft include aircraft with wingspan between 49 and 79 feet such as GA twin-engine piston aircraft (i.e. Beechcraft King Air 100) and small GA jets (i.e. Cessna Citations and Hawker 850).

taxilane separations in the South Apron[3]. Aircraft operations data[4] has shown a shift in the fleet mix of aircraft between 2000 and 2012 including a substantial increase in the number of air carrier operations, a decrease in air taxi and general aviation operations, and an increase in business jet operations. Airport operational records from 2012 to 2019 confirm continuation of this trend.

Based on an evaluation conducted by McFarland Johnson in 2019, the current apron extension would be approximately 1,140 feet long and 235 feet wide (see Figure 1).

Ground operations on the existing South Apron which contribute to the noise conditions surrounding the airport include aircraft taxiing, the use of aircraft-mounted auxiliary power units (APUs) on GA jets, aircraft start-ups including piston and jet aircraft, and the use of ground power units (GPUs).

To proactively address community concerns, the Airport Commission has adopted a voluntary policy on the use of APUs. This voluntary policy prohibits their use except to enable an expedited start up, or, when approved by the Airport Operations Supervisor. External DC-power GPUs are available and should be requested whenever possible. The policy also states that APU use should be limited to a minimum required for pre-flight and post-flight procedures, that the bleed air should be turned off for air-conditioning, and that alternative parking should be requested if extended APU use is required.

In response to comments received during the 2015 Master Plan process, the Airport Commission has also proposed the addition of a perimeter noise barrier along the South Apron. As described in the 2015 Master Plan, a 2,600-foot long and 15-foot tall noise wall is proposed along the existing South Apron and the proposed extension. This perimeter noise wall was proposed as a potential add-on to the phased repaving of the existing South Apron and the recommended South Apron extension projects.

1.2 Regulatory Context

In accordance with the Federal Aviation Administration's (FAA) Environmental Desk Reference[5] (Chapter 17, *Noise*), the Proposed Action to extend the South Apron and/or to introduce a perimeter noise barrier does not require a noise impact assessment since they would not affect aircraft flight operations. Airport actions that could cause noise impacts and warrant detailed noise analyses using FAA-approved models include new or extended runways and taxiways, navigational aid installations, land purchases for airport-related uses, substantial airport construction or demolition activities, and substantial changes in aircraft operations involving the number of aircraft, aircraft types, new or revised approach or departure profiles, or new or relocated airport access roadways.

Group III aircraft include aircraft with wingspan between 79 and 118 feet such as large GA jet aircraft (i.e. Bombardier Global Express and Gulfstream 550/650).

[3] Taxilane and taxiway clearance requirements are defined in FAA Advisory Circular 150/5300-13A Section 404 a (2) and (4) and b (1).

[4] 2015 Master Plan Update Table 4-1.

[5] Federal Aviation Administration Office of Airport Planning and Environmental Division, APP-400, October 2007.

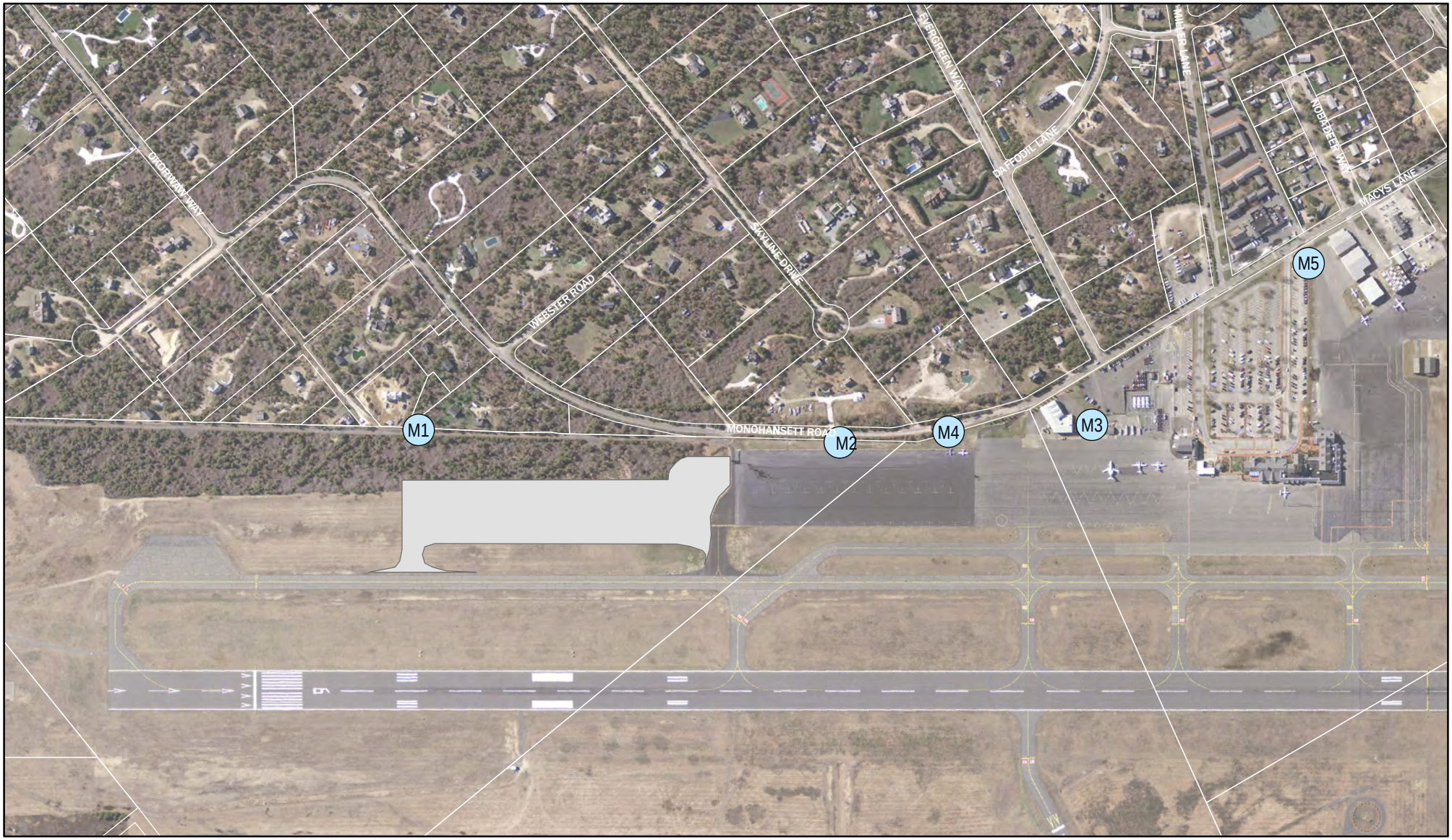
FAA typically does not provide funding for noise abatement measures unless they are part of a Part 150 or Airport Noise Compatibility Planning (NPC) program which are eligible for Airport Improvement Program (AIP) funding. The Part 150 process involves developing noise exposure maps (NEMs) using the FAA-approved Aviation Environmental Design Tool (AEDT) and identifying compatible and non-compatible land use around the airport. Noise abatement measures that may implemented as part of the Part 150 process include residential or institutional sound insulation programs (i.e., replacing windows and doors with ones that attenuate sound better), noise abatement departure or arrival procedures, and/or acquisition of non-compatible land use to convert to more compatible uses.

As a locally funded project, the methodology for evaluating noise for the potential extension of the South Apron and perimeter noise barrier or earthen berm differs from the Part 150 requirement methodology at the owner's request. Airports may implement aircraft and access restrictions for Stage 2 and/or Stage 3 aircraft in accordance with 14 CFR Part 161 regulations. The Airport should not construe information contained in this report as preempting Part 161 regulatory obligations, which are beyond the scope of this study.

1.3 Noise Study Overview

The noise study included noise measurements of existing aircraft ground operations over a summer weekend when aircraft operations are typically highest. The measurements included long-term (approximately 55 hours) measurements at three locations near the South Apron and short-term (hourly) measurements at two locations near the airport property boundary to understand the noise emissions of specific ground operations including APUs, start-ups, taxiing, and GPUs. Noise modeling has been completed to evaluate the potential for increase in noise with the proposed South Apron extension and the potential benefit from the proposed perimeter noise barrier. This study includes an analysis of the following alternatives:

- Baseline: Existing conditions during a peak summer period
- Alternative 1: New south apron extension without a physical noise barrier
- Alternative 2: New south apron extension with use of GPU in lieu of APU (without a physical barrier)
- Alternative 3: New south apron extension with a noise barrier (per 2015 Master Plan)
- Alternative 4: New south apron extension with a 15-foot earthen berm
- Alternative 5: New south apron extension with a noise barrier (per 2015 Master Plan and use of a GPU in lieu of APU on the extension.
- Alternative 6: New south apron extension with a 15-foot earthen berm and use of a GPU in lieu of APU on the extension.



South Apron Expansion

Noise Measurement SIte

ACK South Apron Noise Study

Figure 1
Proposed South Apron Extension
and Noise Measurement Sites

0 140 280 560 840 1,120
Feet

Data Sources: MassGIS, Jacobs, VHB

2

Background on Sound

Airborne sound is the rapid fluctuations of air pressure above and below ambient pressure levels. Noise is defined as unwanted or excessive sound. Sound becomes unwanted when it interferes with normal activities such as sleep, work, communication, or recreation. How people perceive sound depends on several measurable physical characteristics, including:

- Sound Level – Sound level is based on the amplitude change in pressure and is related to the loudness or intensity. Human hearing covers a wide range of changes in sound pressure amplitude. Therefore, sound levels are most often measured on a logarithmic scale of decibels (dB) relative to 20 micro-pascals. The dB scale compresses the audible range of acoustic pressure levels, which can vary from the threshold of hearing (0 dB) to the threshold of pain (120 dB). Because sound levels are measured in dB, the addition of two sound levels is not linear. For example, adding two equal sound levels result in a 3-dB increase in the overall level. Research indicates the general relationships between sound level and human perception are as follows:
    - A 3-dB increase is a doubling of acoustic energy and is approximately the smallest difference in sound level that can be perceived in most environments.
    - A 10-dB increase is a tenfold increase in acoustic energy and is generally perceived as a doubling in loudness to the average person.
- Frequency – Sounds are comprised of acoustic energy distributed over a range of frequencies. Acoustic frequencies, commonly referred to as tone or pitch, are typically measured in Hertz (Hz). Human hearing generally ranges from 20 to 20,000

Hz; however, the human ear does not perceive sound levels from each frequency as equally loud. To compensate for this phenomenon in perception, a frequency filter known as A weighting is commonly used to evaluate environmental noise levels, and sound levels are denoted as "dBA."

Sound levels reported in octave or one-third-octave frequency bands are often used to describe the frequency content of different sounds. Some sources of sound can generate "pure tones," which is when there is a concentration of sound within a narrow frequency range such as a whistle. Humans can hear pure tones very well, and such conditions can be a cause of increased annoyance.

A variety of sound level descriptors can be used for environmental noise analyses. These descriptors relate to the way sound varies in level over time. The following is a list of common sound level descriptors:

- Maximum Sound Level (Lmax) – Many sources of sound, including mobile sources and stationary sources, change over time. It is common to describe sound in terms of the maximum (Lmax) sound level emissions. . The figure below presents the maximum sound levels of common indoor and outdoor sources.

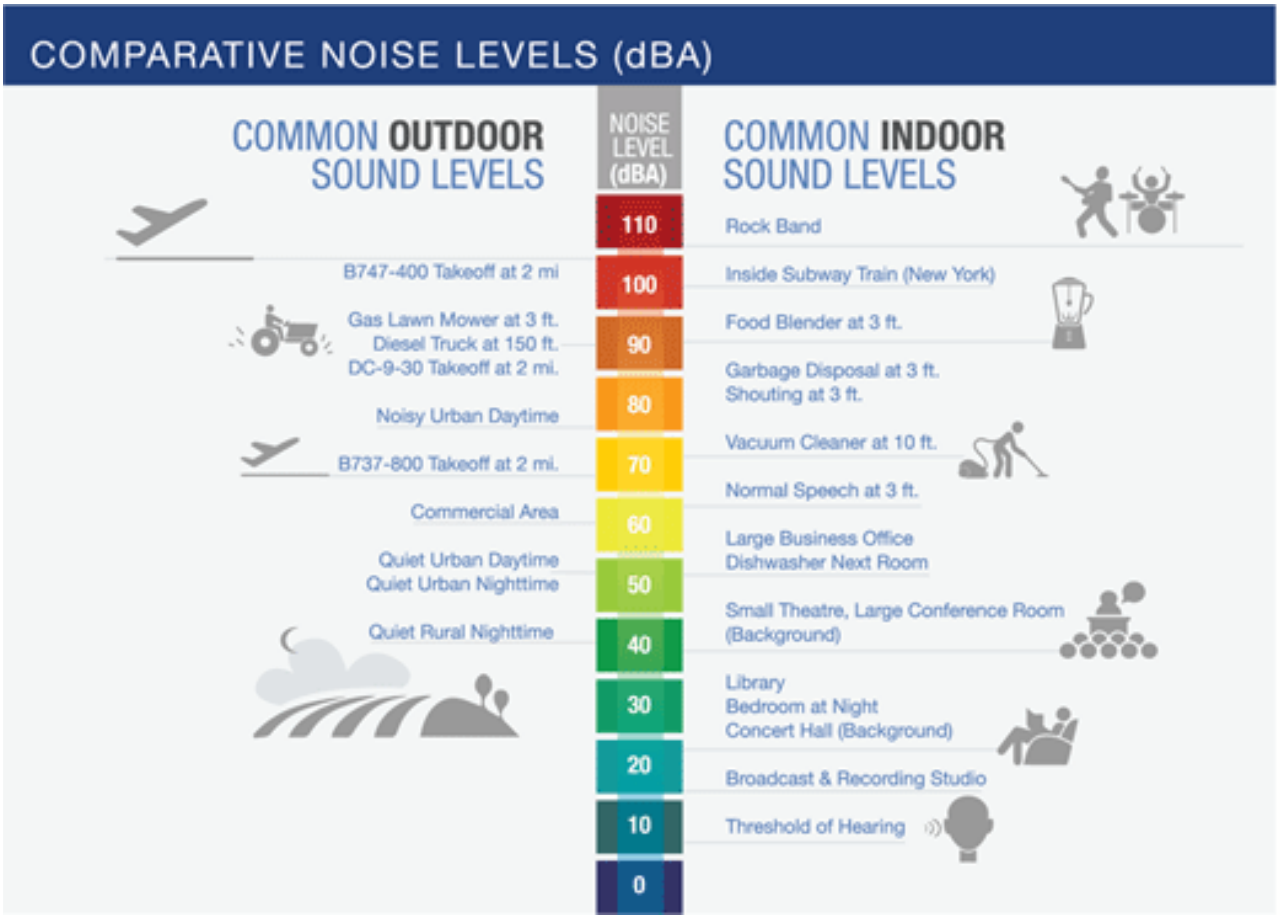


Figure 2 Maximum Noise Levels from Common Indoor and Outdoor Sources

Source: FAA, 2019.

- Sound Exposure Level (SEL) - SEL represents all of the acoustic energy of an individual noise event. SEL captures both the level (amplitude) and the duration of a sound event in a single numerical quantity, by "squeezing" all the noise energy from an event into one number. This provides a uniform way to make comparisons among noise events of various durations.
- Energy-Average Sound Level (Leq) – Leq is a single value, which represents the same acoustic energy as the fluctuating levels that exist over a given period of time. The Leq takes into account how loud noise events are during the period, how long they last, and how many times they occur. Leq is commonly used to describe environmental noise and relates well to human annoyance.
- Day-night Average Sound Level (DNL) – DNL n is similar to the Leq in that it is a single value, which represents the same acoustic energy as the fluctuating levels, that exists over a 24-hour period. The DNL takes into account how loud sound events are, how long they last, how many times they occur over a 24-hour period, and whether they occur during the day (7:00 AM to 10:00 PM) or night (10:00 PM to 7:00 AM). Sound that occurs during the night is given a 10-dB penalty to account for the increased human sensitivity to noise at night.

Figure 3 presents how DNL accounts for both the sound exposure level from each aircraft operation as well as the number of operations throughout the day. For example, DNL 65 dBA could result from 100 aircraft operations each generating an SEL of 94 dBA, 10 aircraft operations each generating an SEL of 104 dBA, or 1 aircraft operation generating an SEL of 114 dBA.

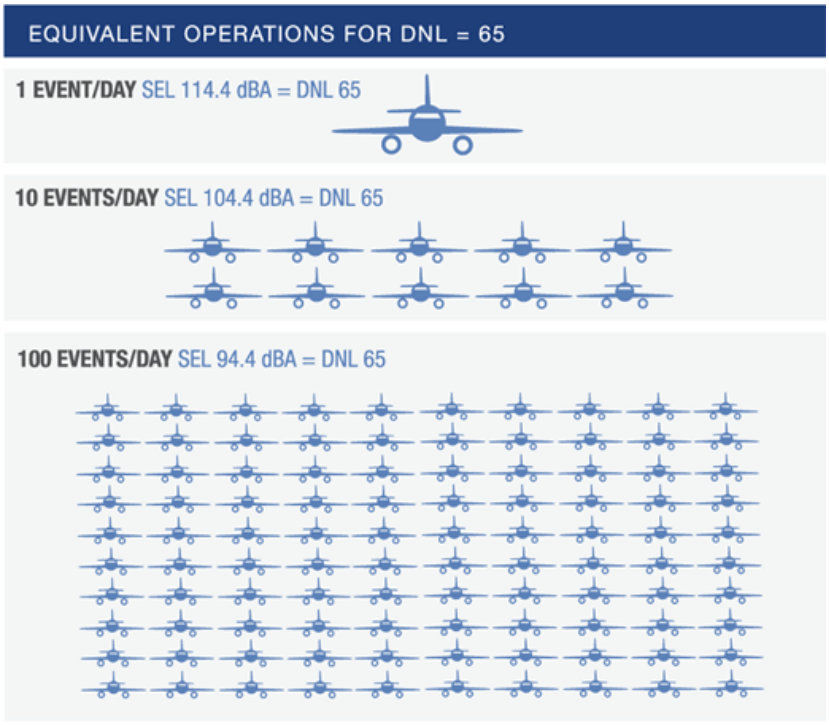


Figure 3 Equivalent Aircraft Operations for DNL 65 dBA

Source: FAA, 2019.

- Statistical Sound Levels – Sound level metrics, such as L01, L10, L50 or L90, represent the levels that are exceeded for a particular percentage of time over a given period. For example, L10 is the level that is exceeded for 10 percent of the time. Therefore, it represents the higher end of the range of sound levels. The L90, on the other hand, is the level that is exceeded 90 percent of the time, and therefore, is representative of a lower background sound level.
- Sound Power Level – The sound power level of a source is a way to measure the total sound energy that is emitted. Unlike the sound pressure level of a source, which depends on how far away from the source you measure or observe the sound, the sound power level is not a function of distance. Sound power levels are commonly used when modeling sound propagation.

3

Noise Measurements

VHB conducted noise measurements of existing aircraft ground operations over a summer weekend when aircraft operations are typically highest. The measurements included long-term (approximately 55 hours) measurements at three locations near the South Apron and short-term (hourly) measurements at two locations near the airport property boundary to understand the noise emissions of specific ground operations including APUs, start-ups, taxiing, and GPUs.

3.1 Long-Term Noise Measurements

As shown in Figure 1, VHB conducted noise measurements between Friday July 26 and Sunday July 28, 2019 at three locations including the Boundary Road Site (M1), South Apron (M2), and the Airport Rescue and Fire Fighting (ARFF) (M3) for approximately 55 hours from 12:00 P.M. on Friday until 6:00 P.M. on Sunday. The long-term measurement sites were all approximately 950 feet from runway 6/24 and would typically have similar noise exposure due to aircraft flights based on recent noise exposure maps. Short-term noise measurements were also conducted at two additional locations Viewing Area (M4) and North Ramp (M5) for approximately 2 to 3 hours each day.

Photo 1 Boundary Road Measurement Site (M1)

Photo 2 South Apron Measurement Site (M2)

Photo 3 ARFF Station Measurement Site (M3)

Photo 4 Viewing Area Measurement Site (M4)

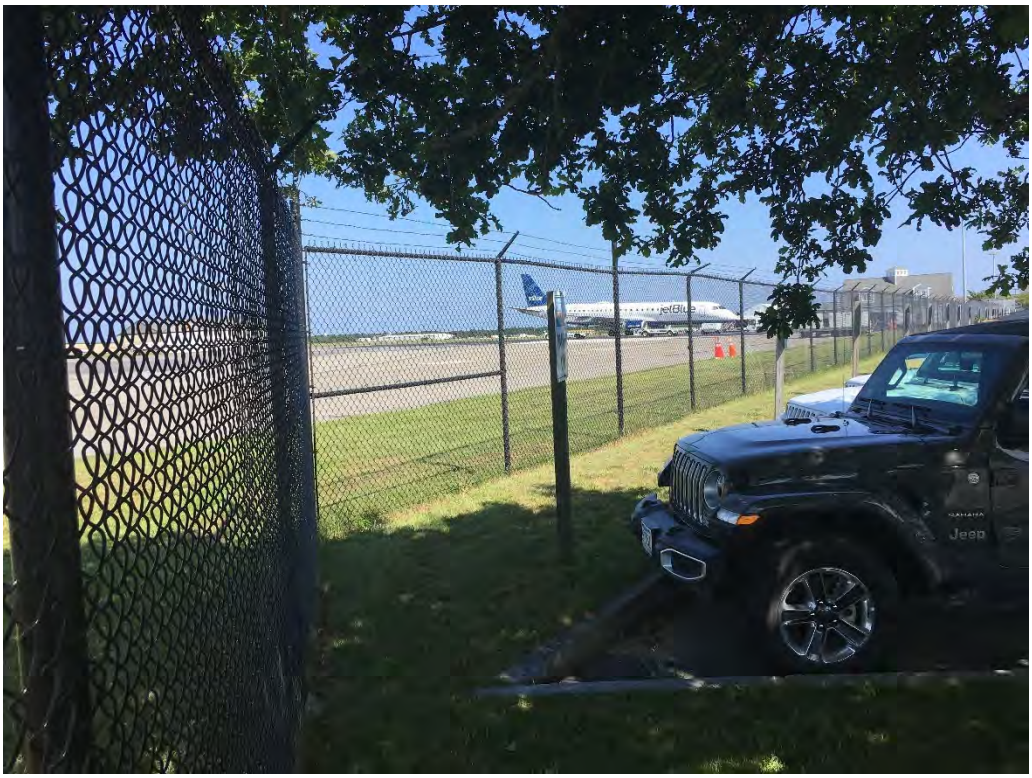


Photo 5 North Ramp Measurement Site (M5)

VHB made observations of aircraft ground operations and conducted reference measurements of specific ground operations. The predominant source of noise at the measurement locations was from ground operations. Aircraft takeoffs and landings were audible but were typically not the predominant source of noise unless there were minimal ground operations occurring. Many aircraft takeoffs and landings were observed from the Viewing Area (M4) and generated maximum noise levels near 80 dBA. Most aircraft flight operations would last less than a minute. Depending on the ground operations, noise levels from APUs, taxiing, and startups often approached or exceeded 90 dBA and lasted for substantially longer periods of time (i.e. 10-15 minutes) than aircraft flight operations.

As shown in Table 1, the noise level was DNL 62.2 dBA at the Boundary Road Site (M1), DNL 76.3 dBA at the South Apron Site (M2), and DNL 80.6 dBA at the ARFF station based on the average of all 24-hour DNL values throughout the measurement period.

Table 1 Summary of DNL Noise Measurement Results

Measurement Site	DNL (dBA)
M1 (Boundary Road)	**62.2**
M2 (South Apron)	**76.3**
M3 (ARFF Station)	**80.6**

Source: VHB, 2019.

The DNL measurement results at each of the long-term sites indicate that noise levels were approximately DNL 14 dBA higher at the South Apron site compared to the Boundary Road site and observations indicate this difference was primarily attributed to ground operations. Figures 4 to 6 present the overall A-weighted hourly equivalent (Leq) noise levels and the range of hourly sound levels at each of the long-term measurement locations. Figure 7 compares the Leq sound levels at all long-term measurement sites. Additional hourly noise measurement results including the minimum (Lmin), maximum (Lmax), equivalent (Leq), and statistical results (L01, L10, L33, L50, L90, and L90) are presented in the Appendix.

Table 2 summarizes the daytime and nighttime Leq noise measurement results at each site.

- At the Boundary Road site (M1), the daytime Leq noise levels ranged from 62.6 to 62.7 dBA and nighttime Leq noise levels ranged from 50.0 to 52.0 dBA. Nighttime noise levels were typically 10 to 12 dBA quieter than daytime noise levels.
- At the South Apron site (M2), the daytime Leq noise levels ranged from 70.7 to 78.2 dBA and nighttime Leq noise levels ranged from 54.1 to 68.3 dBA. Nighttime noise levels were up to 25 dBA quieter than daytime noise levels.
- At the ARFF Station (M3), the daytime Leq noise levels ranged from 81.8 to 83.8 dBA and nighttime Leq noise levels ranged from 59.0 to 69.0 dBA. Nighttime noise levels were up to 23 dBA quieter than daytime noise levels.

Table 2 Summary of Daytime and Nightime Leq Noise Measurement Results

Measurement Site	Friday Day (12:00 – 22:00) (Leq, dBA)	Friday/Saturday Night (22:00 – 7:00) (Leq, dBA)	Saturday Day (7:00 – 22:00) (Leq, dBA)	Saturday/Sunday Night (22:00 – 7:00) (Leq, dBA)	Sunday Day (7:00 – 18:00) (Leq, dBA)
M1 (Boundary Road)	**62.7**	**50.0**	**62.6**	**52.0**	**62.7**
M2 (South Apron)	**70.7**	**54.1**	**78.2**	**68.3**	**76.0**
M3 (ARFF Station)	**83.8**	**59.0**	**81.8**	**69.0**	**82.8**

Source: VHB, 2019.

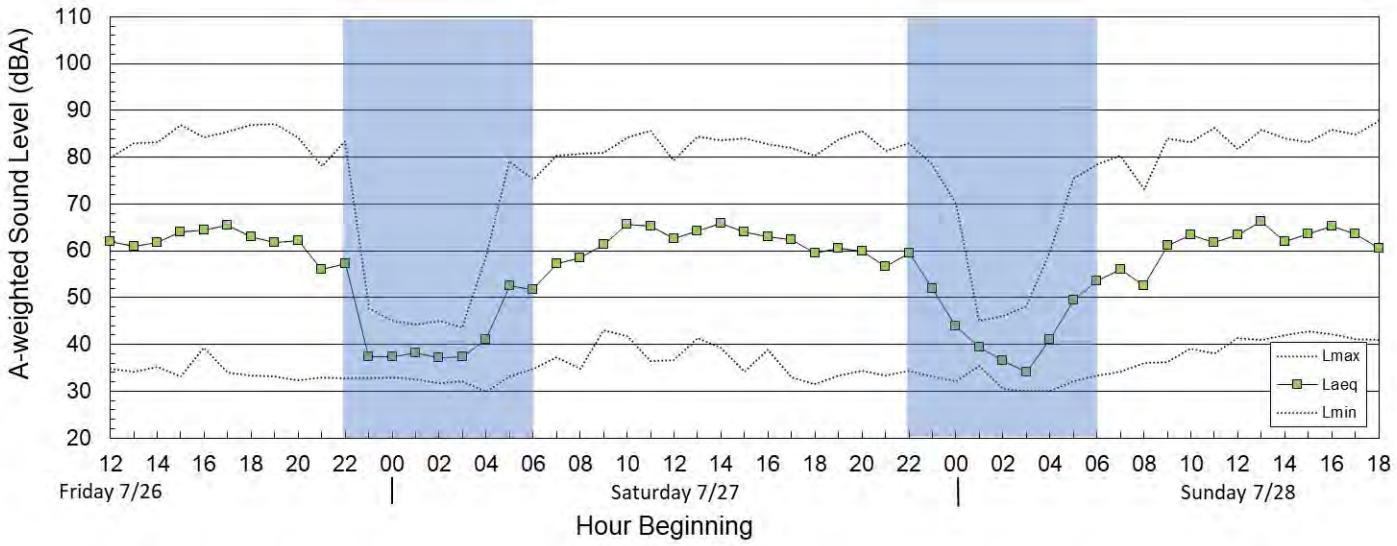


Figure 4 Hourly Noise Levels at Boundary Road Site (M1)

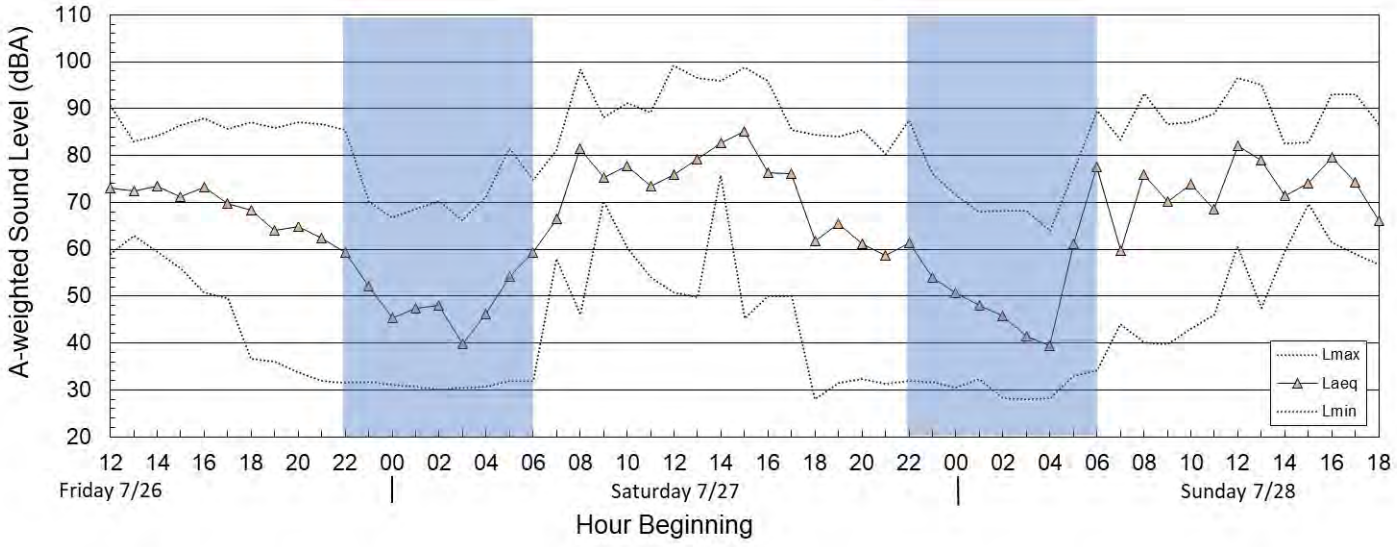


Figure 5 Hourly Noise Levels at South Apron (M2)

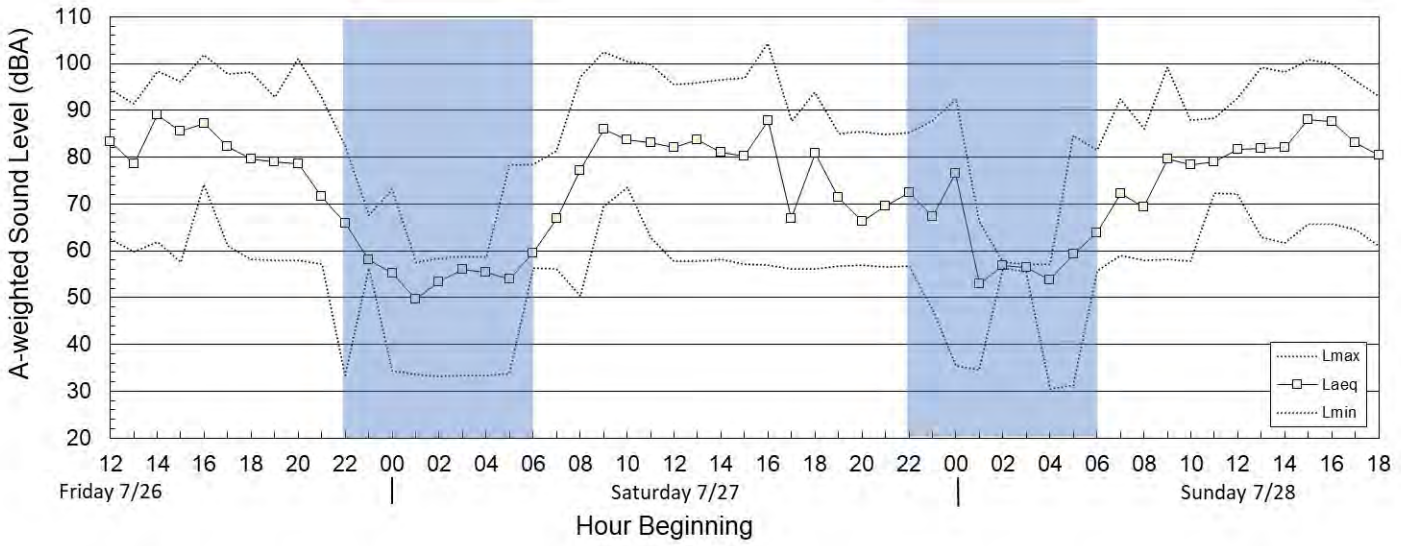


Figure 6 Hourly Noise Levels at ARFF Station (M3)

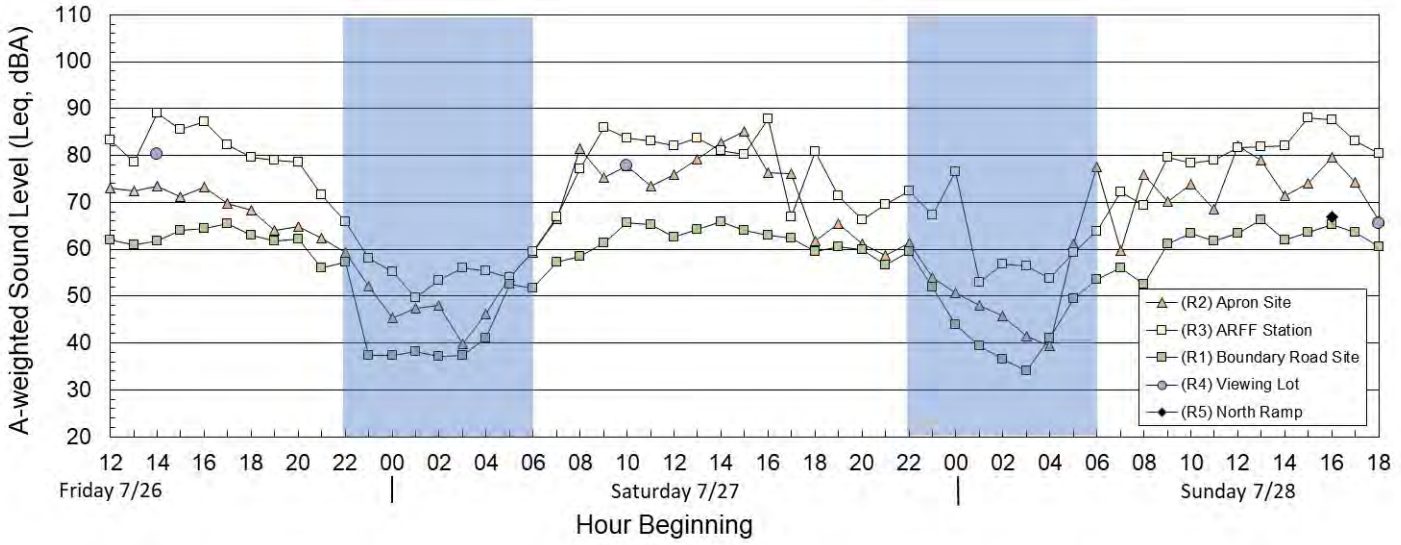


Figure 7 Comparison of Hourly Leq Noise Levels at All Sites (M1 to M3)

3.2 Noise Measurements of Ground Operations

Noise measurements of ground operations were conducted in order to model noise from the proposed South Apron extension with and without sound reduction features such as a wall or earthen berm. The modeling requires an understanding of the overall sound level and frequency content (i.e., low-pitched or high-pitched sound) generated from different ground operations. Measurements of APUs, GPUs, aircraft taxiing, and startups were conducted during the attended measurements at sites M4 and M5. In some cases, the sound level meter was relocated closer to specific ground operations.

Table 3 presents a summary of the noise measurements of a typical APU, GPU, twin-engine piston start-up, and a GA jet taxiing. This table presents the maximum noise level from these sources, the sound power level, and the approximate source height. Comparing the estimated sound power level of each source is a way to measure the total sound energy that is emitted independent of distance. The height of the source is a key factor as it relates to sound propagation (higher sources will typically propagate more efficiently) and how much noise reduction a noise barrier would provide (a noise barrier is more effective at reducing noise from short sources since it can more easily block the line-of-sight between the source and the receptor). This table shows that noise (i.e., estimated sound power level) from the twin-engine startup was the loudest of all sources, the APU was next loudest, and the GPU is substantially quieter than other sources.

Table 3 Noise Measurement Results of Ground Operations

Noise Source	Distance (meters)	Orientation	Maximum Noise Level (Lmax, dBA)	Sound Power Level (Lmax, dBA)	Approximate Source Height (meters)
APU	30	0 degrees from nose	**81.6**	**119.1**	**4**
GPU	40	N/A	**66.5**	**106.5**	**2**
Twin Engine Start-up	40	45 degrees from nose	**89.9**	**129.9**	**2**
Jet Taxiing	30	90 degrees from nose	**78.4**	**115.8**	**4**

Source: VHB, 2019.

Figures 8 to 11 present the overall A-weighted and A-weighted 1/3-octave band sound levels for each of the ground sources.

- The predominant frequencies of sound for the APU are in the mid to upper range between 1,000 and 5,000 Hz.
- The GPU has relatively equal frequency content between 80 and 10,000 Hz with a peak level around 800 Hz.
- The twin-engine piston start-up has a clear tone, based on the rotational speed of the propeller, in the 125-Hz band, and additional tones up through approximately 5,000 Hz with the loudest tone at in the 1,600-Hz frequency band.
- The jet taxiing has significant mid and upper frequency content between approximately 500 and 8,000 Hz.

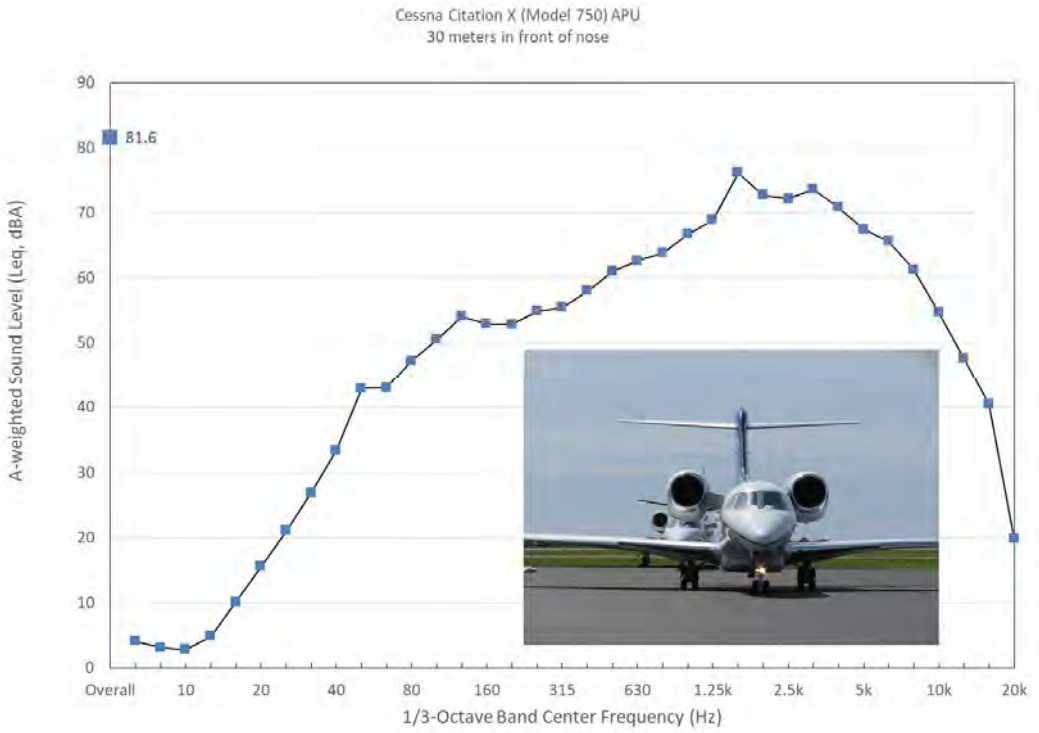


Figure 8 Noise Levels of Cessna Citation X Model 750 APU at 40 meters

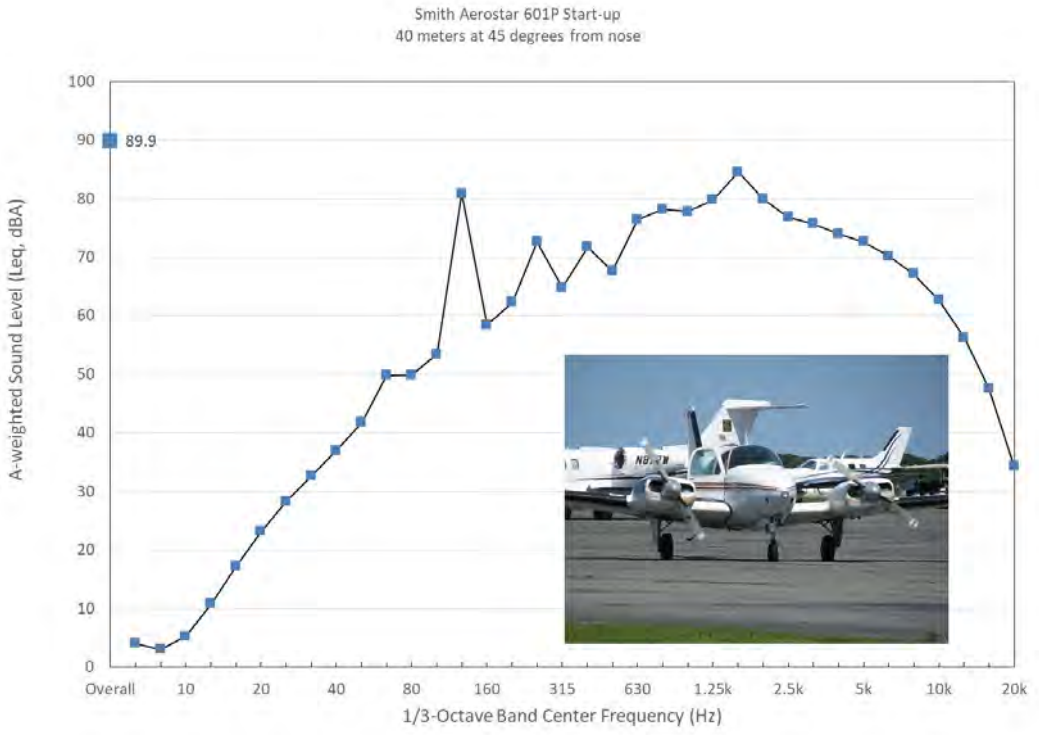


Figure 9 Noise Levels of Smith Aerostar 601P Start-up at 40 meters

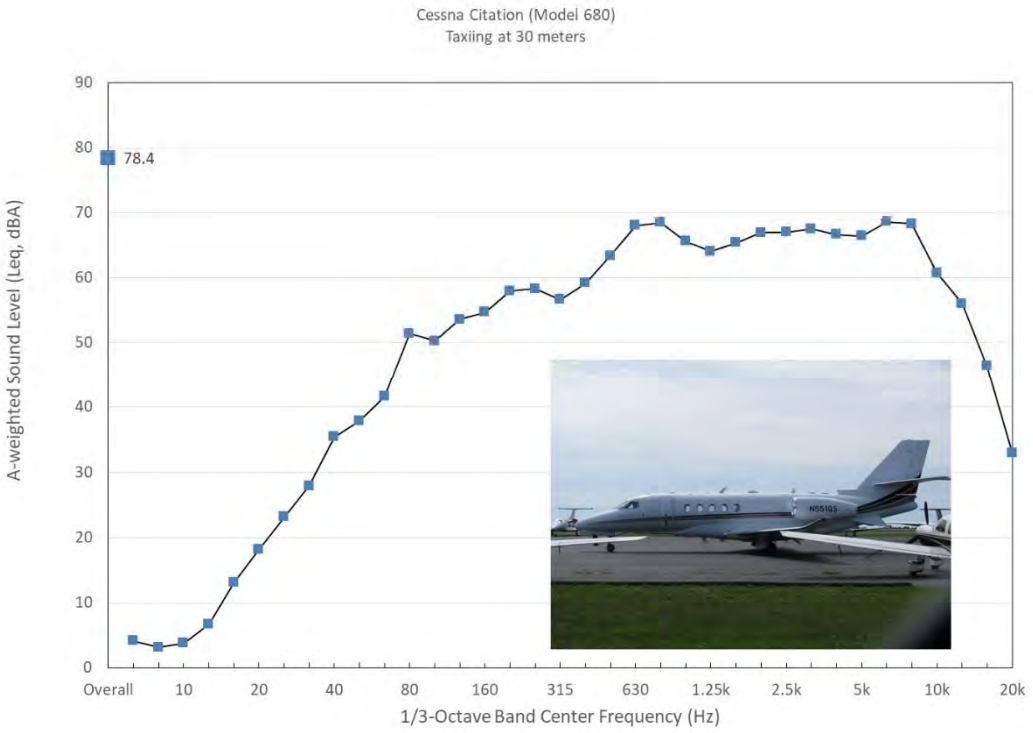


Figure 10 Noise Levels of Cessna Citation Model 680 Taxiing at 30 meters

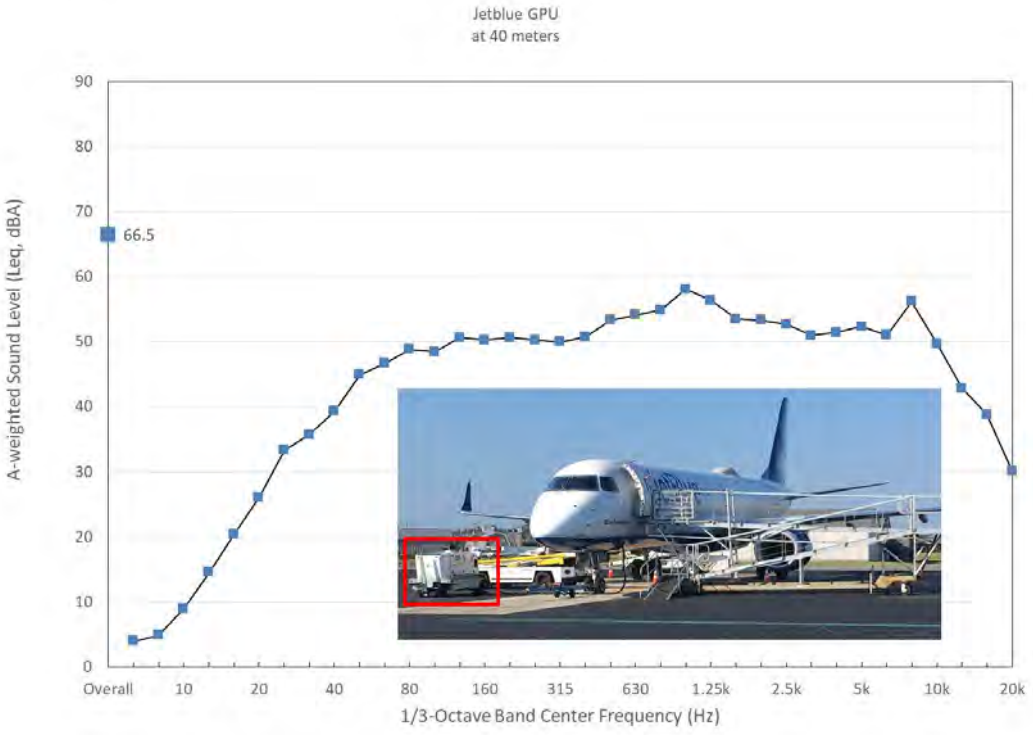


Figure 11 Noise Levels of Jetblue GPU at 40 meters

4

Noise Assessment

VHB has conducted modeling of aircraft ground operations to assess the potential changes in noise due to the proposed South Apron extension and/or the introduction of a perimeter noise barrier.

4.1 Noise Modeling Methodology

The noise modeling has been conducted using Cadna-A sound prediction software which implements the International Standards Organization Standard 9613 "Acoustics – Attenuation of sound during propagation outdoors". This sound prediction model takes in to account the following features:

- Noise source emissions and directivity
- Atmospheric conditions
- Ground cover and absorption characteristics
- Intervening objects such as terrain or buildings
- Noise reduction from barriers

Aircraft ground operations and the associated noise generated varies according to the number, type, duration and location of different events such as aircraft taxiing to and from the South Apron, using APUs, using GPUs, and aircraft start-ups. Observations of the South Apron during measurements conducted July 26 to July 28, 2019 indicated that there are periods during the day when approximately one to three aircraft at the South Apron were running their APUs along with common flight procedures including aircraft start-ups and taxiing. GPUs were observed to be used only by Jetblue at the North Ramp.

A detailed evaluation of aircraft ground operations is beyond the scope of this study. Therefore, to evaluate the potential change in noise due to the South Apron and the noise reduction from the perimeter noise barrier, typical conditions have been analyzed based on observations made in the field. The following summarizes the existing operating conditions and six alternative operating conditions.

- Existing Conditions (see Figure 12)
    - One APU near the southern end of the existing apron
    - One APU near the ARFF Station
    - One jet taxiing near the center of the existing apron
    - One prop plane start-up near the center of the existing apron
- Alternative 1: Apron extension without a physical barrier (see Figure 13)
    - Same sources (i.e., APU, jet taxiing, start-up) are in same location as existing conditions
    - One additional APU near the west end of the apron extension
    - One additional jet taxiing on the apron extension
- Alternative 2: Apron extension without a physical barrier (See Figure 14)
    - Same sources as Alternative 1 except a GPU is included in lieu of the APU on the apron extension
- Alternative 3: Apron extension with a 15-foot wall (See Figure 15)
    - Same sources as Alternative 1
    - 2,600-foot long and 15-foot tall noise barrier (per 2015 Master Plan)
- Alternative 4: Apron extension with a 15-foot berm (See Figure 16)
    - Same sources as Alternative 1
    - 1,500-foot long and 15-foot tall earthen berm with 2:1 slope on both sides
- Alternative 5: Apron extension with a 15-foot wall (See Figure 17)
    - One APU near the southern end of the existing apron
    - One APU near the ARFF Station
    - One jet taxiing near the center of the existing apron
    - One prop plane start-up near the center of the existing apron
    - One GPU near the west end of the apron extension
- Alternative 6: Same sources as Alternative 5 with a 15-foot berm (See Figure 18)

The typical existing ground operations were also selected to result in similar noise levels as those which were measured near the South Apron during the day. Specifically, the modeled existing noise levels were 77 dBA at the South Apron measurement site (M2) which is similar to the measured sound levels during the day (see Figure 5).

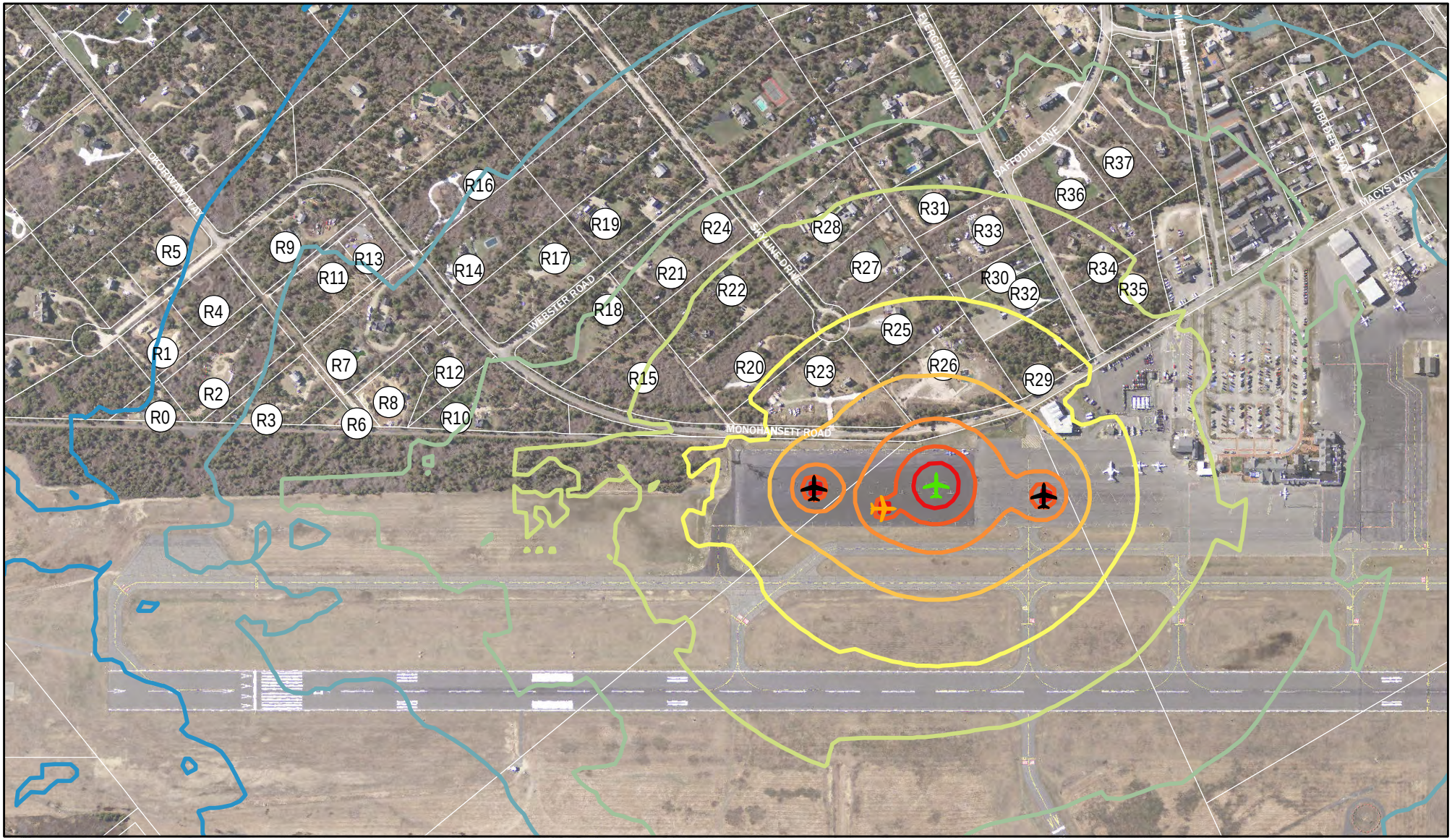
4.2 Existing Conditions

There are approximately 38 single-family residences within 1,000 feet of the existing South Apron and proposed South Apron extension. These residences are on Monohansett Road, Webster Road, Okorwaw Way, Skyline Drive, Skyline Drive, Daffodil Lane, and Evergreen Way. As shown in Table 4 and Figure 12, noise from ground operations range from 50 to 74 dBA (Lmax) throughout all of the receptors. Noise levels are highest (69 to 74 dBA) at the residences closest to the existing Apron, such as R20, R23, R26, and R29.

Table 4 Existing Noise Levels from Typical Ground Operations

Receptor	Address	Existing Noise Level (Lmax, dBA)
R-0	1R MONOHANSETT RD	51
R-1	3 MONOHANSETT RD	50
R-2	47 OKORWAW AV	52
R-3	49 OKORWAW AV	56
R-4	5 MONOHANSETT RD	51
R-5	41 OKORWAW AV	50
R-6	51 OKORWAW AV	58
R-7	15 MONOHANSETT RD	57
R-8	OKORWAW AV	58
R-9	7 MONOHANSETT RD	54
R-10	31 MONOHANSETT RD	59
R-11	48 OKORWAW AV	56
R-12	25 MONOHANSETT RD	58
R-13	46 OKORWAW AV	54
R-14	26 MONOHANSETT RD	56
R-15	38 MONOHANSETT RD	65
R-16	20 MONOHANSETT RD	55
R-17	2 WEBSTER RD	57
R-18	3 WEBSTER RD	60
R-19	65 SKYLINE DR	58
R-20	83 SKYLINE DR	69
R-21	5 WEBSTER RD	62
R-22	77 SKYLINE DR	66
R-23	87 A SKYLINE DR	72
R-24	5 WEBSTER RD	63
R-25	90 SKYLINE DR	72
R-26	42 MONOHANSETT RD	74
R-27	84 SKYLINE DR	68
R-28	78 A SKYLINE DR #1	66
R-29	2 EVERGREEN WY	72
R-30	4A EVERGREEN WY	69
R-31	8 EVERGREEN WY	66
R-32	4 EVERGREEN WY	69
R-33	6 EVERGREEN WY	67
R-34	3 EVERGREEN WY	66
R-35	1 EVERGREEN WY	64
R-36	1 DAFFODIL LN	64
R-37	3 DAFFODIL LN	63

Source: VHB, 2019.



Ground Noise Sources

- Jet APU
- Jet Taxing
- Prop Startup
- Receptors

Ground Noise Level (Lmax, dBA)

- 50 dBA
- 55 dBA
- 60 dBA
- 65 dBA
- 70 dBA
- 75 dBA
- 80 dBA
- 85 dBA
- 90 dBA

ACK South Apron Noise Study

Figure 12
Existing Conditions
Typical Ground Noise

0 140 280 560 840 1,120 Feet

Data Sources: MassGIS, Jacobs, VHB

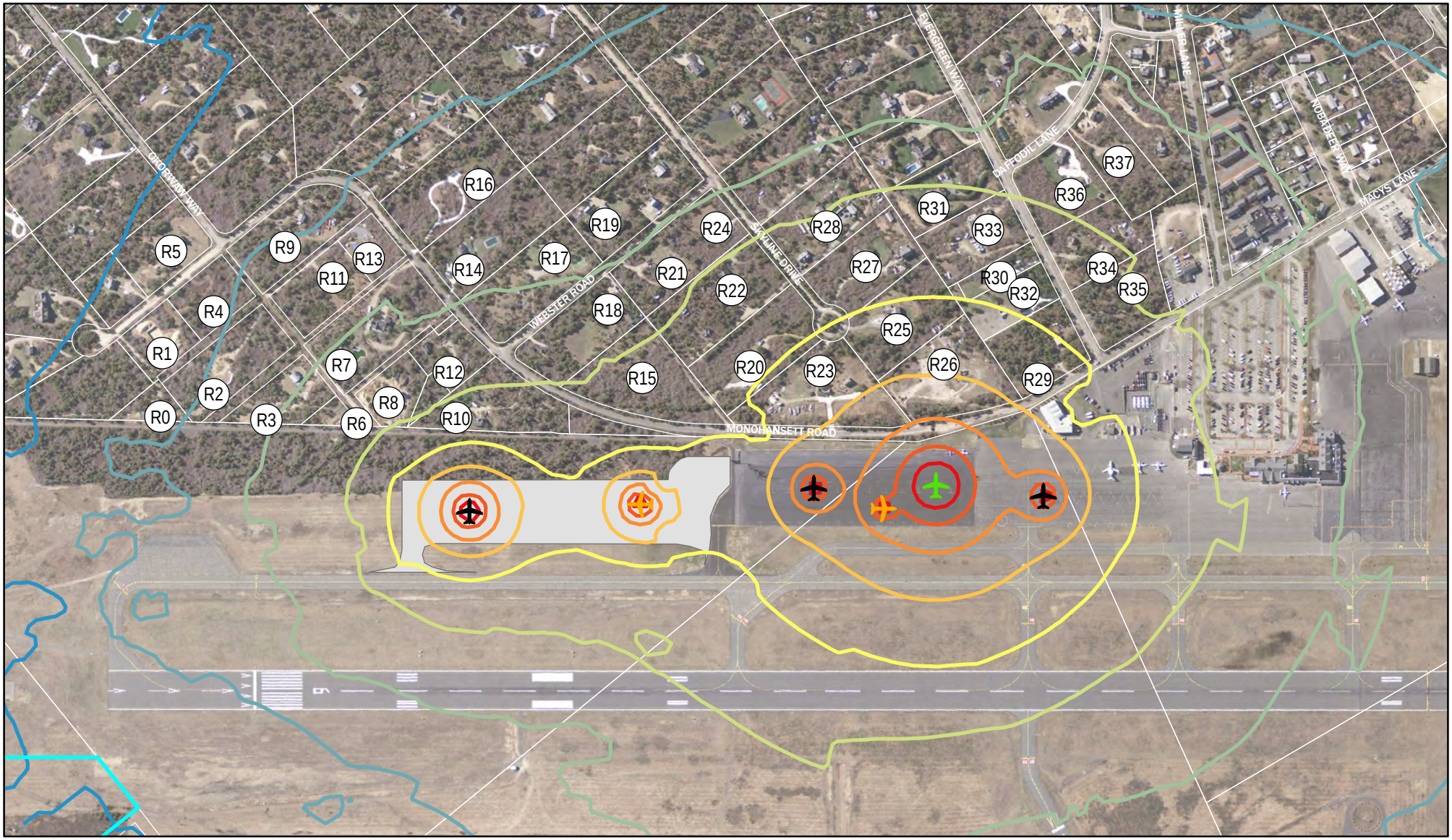
4.3 Alternative 1

As shown in Table 5 and Figure 13, noise from ground operations range from 51 to 74 dBA (Lmax) with the proposed South Apron extension including an additional APU and jet taxiing. Ground noise levels would increase at many receptors near the extension due to the introduction of new sources. The greatest increase in noise would be at receptors such as R8, R10, and R12 which would increase 6 to 8 dBA.

Table 5 Alternative 1 Noise Levels with South Apron Extension

Receptor	Address	Existing Noise Level (Lmax, dBA)	Alternative 1 Noise Level (Lmax, dBA)	Noise Increase (Lmax, dBA)
R-0	1R MONOHANSETT RD	51	54	3
R-1	3 MONOHANSETT RD	50	53	2
R-2	47 OKORWAW AV	52	56	4
R-3	49 OKORWAW AV	56	60	4
R-4	5 MONOHANSETT RD	51	54	2
R-5	41 OKORWAW AV	50	51	2
R-6	51 OKORWAW AV	58	63	5
R-7	15 MONOHANSETT RD	57	61	4
R-8	OKORWAW AV	58	64	6
R-9	7 MONOHANSETT RD	54	56	2
R-10	31 MONOHANSETT RD	59	67	8
R-11	48 OKORWAW AV	56	58	3
R-12	25 MONOHANSETT RD	58	63	6
R-13	46 OKORWAW AV	54	57	3
R-14	26 MONOHANSETT RD	56	59	3
R-15	38 MONOHANSETT RD	65	66	1
R-16	20 MONOHANSETT RD	55	57	2
R-17	2 WEBSTER RD	57	59	2
R-18	3 WEBSTER RD	60	62	2
R-19	65 SKYLINE DR	58	59	1
R-20	83 SKYLINE DR	69	69	0
R-21	5 WEBSTER RD	62	63	1
R-22	77 SKYLINE DR	66	66	0
R-23	87 A SKYLINE DR	72	72	0
R-24	5 WEBSTER RD	63	63	0
R-25	90 SKYLINE DR	72	72	0
R-26	42 MONOHANSETT RD	74	74	0
R-27	84 SKYLINE DR	68	68	0
R-28	78 A SKYLINE DR #1	66	66	0
R-29	2 EVERGREEN WY	72	72	0
R-30	4A EVERGREEN WY	69	69	0
R-31	8 EVERGREEN WY	66	66	0
R-32	4 EVERGREEN WY	69	69	0
R-33	6 EVERGREEN WY	67	67	0
R-34	3 EVERGREEN WY	66	66	0
R-35	1 EVERGREEN WY	64	64	0
R-36	1 DAFFODIL LN	64	64	0
R-37	3 DAFFODIL LN	63	63	0

Source: VHB, 2020.



Ground Noise Sources

- Jet APU
- Jet Taxing
- Prop Startup
- South Apron Expansion
- Receptors

Ground Noise Level (Lmax, dBA)

- 50 dBA
- 55 dBA
- 60 dBA
- 65 dBA
- 70 dBA
- 75 dBA
- 80 dBA
- 85 dBA
- 90 dBA

ACK South Apron Noise Study

Figure 13
Alternative 1
Noise Levels with South Apron Expansion

0 140 280 560 840 1,120 Feet

Data Sources: MassGIS, Jacobs, VHB

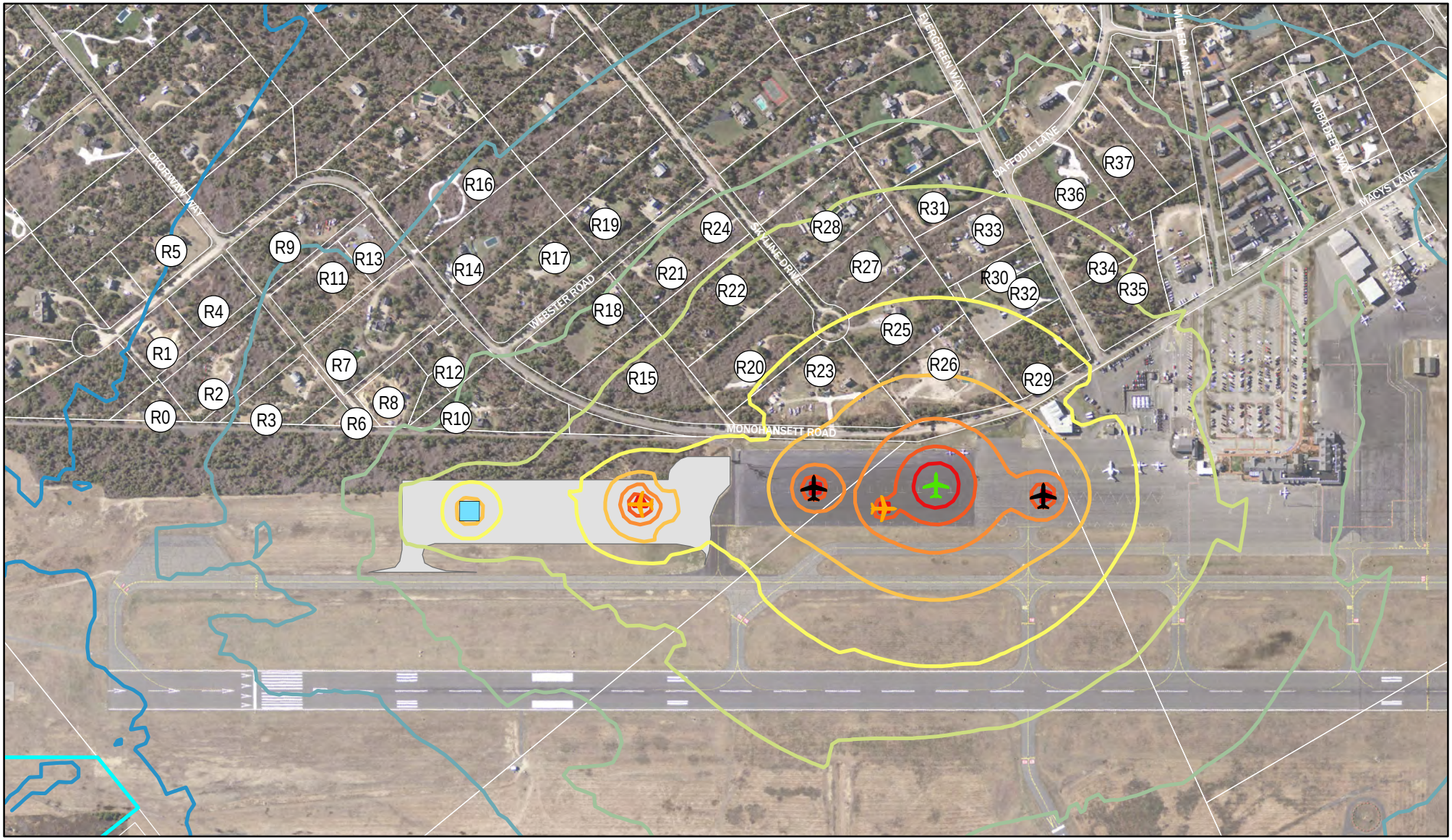
4.4 Alternative 2

As shown in Table 6 and Figure 14, noise from ground operations would range from 50 to 74 dBA (Lmax) with the South Apron extension, but with a GPU in lieu of the additional APU. Ground noise levels would only increase 1 to 2 dBA at receptors near the South Apron extension.

Table 6 Alternative 2 Noise Levels with South Apron Extension and GPU

Receptor	Address	Existing Noise Level (Lmax, dBA)	Scenario 2 Noise Level (Lmax, dBA)	Noise Increase (Lmax, dBA)
R-0	1R MONOHANSETT RD	51	51	1
R-1	3 MONOHANSETT RD	50	51	1
R-2	47 OKORWAW AV	52	53	1
R-3	49 OKORWAW AV	56	57	1
R-4	5 MONOHANSETT RD	51	52	1
R-5	41 OKORWAW AV	50	50	1
R-6	51 OKORWAW AV	58	58	1
R-7	15 MONOHANSETT RD	57	58	1
R-8	OKORWAW AV	58	59	1
R-9	7 MONOHANSETT RD	54	54	0
R-10	31 MONOHANSETT RD	59	61	2
R-11	48 OKORWAW AV	56	56	1
R-12	25 MONOHANSETT RD	58	59	1
R-13	46 OKORWAW AV	54	55	1
R-14	26 MONOHANSETT RD	56	57	1
R-15	38 MONOHANSETT RD	65	66	1
R-16	20 MONOHANSETT RD	55	56	1
R-17	2 WEBSTER RD	57	58	1
R-18	3 WEBSTER RD	60	61	1
R-19	65 SKYLINE DR	58	58	0
R-20	83 SKYLINE DR	69	69	0
R-21	5 WEBSTER RD	62	63	0
R-22	77 SKYLINE DR	66	66	0
R-23	87 A SKYLINE DR	72	72	0
R-24	5 WEBSTER RD	63	63	0
R-25	90 SKYLINE DR	72	72	0
R-26	42 MONOHANSETT RD	74	74	0
R-27	84 SKYLINE DR	68	68	0
R-28	78 A SKYLINE DR #1	66	66	0
R-29	2 EVERGREEN WY	72	72	0
R-30	4A EVERGREEN WY	69	69	0
R-31	8 EVERGREEN WY	66	66	0
R-32	4 EVERGREEN WY	69	69	0
R-33	6 EVERGREEN WY	67	67	0
R-34	3 EVERGREEN WY	66	66	0
R-35	1 EVERGREEN WY	64	64	0
R-36	1 DAFFODIL LN	64	64	0
R-37	3 DAFFODIL LN	63	63	0

Source: VHB, 2020.



Ground Noise Sources

- Jet APU
- Jet Taxing
- Prop Startup
- Ground Power Unit
- South Apron Expansion
- Receptors

Ground Noise Level (Lmax, dBA)

- 50 dBA
- 55 dBA
- 60 dBA
- 65 dBA
- 70 dBA
- 75 dBA
- 80 dBA
- 85 dBA
- 90 dBA

ACK South Apron Noise Study

Figure 14
Alternative 2
South Apron Extension With GPU in lieu of APU

0 140 280 560 840 1,120 Feet

Data Sources: MassGIS, Jacobs, VHB

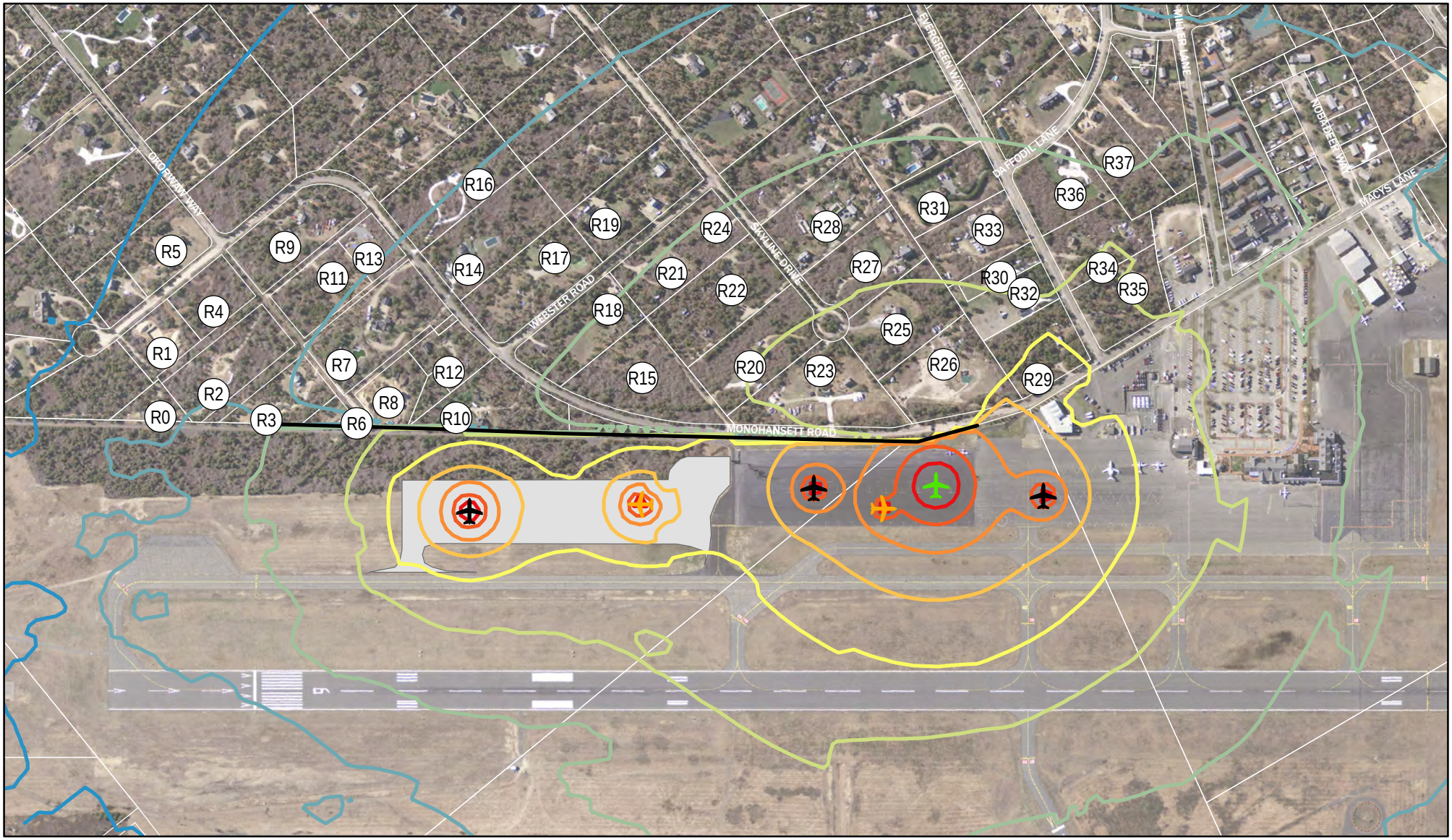
4.5 Alternative 3

As shown in Table 7 and Figure 15, noise from ground operations would range from 51 to 72 dBA (Lmax) with the South Apron extension, with an APU and a jet taxing on the extension, and with a 2,600-foot long and 15-foot tall noise barrier. Ground noise levels would decrease at many receptors behind the proposed noise wall. Noise levels would decrease 3 to 6 dBA at several receptors, such as R15, R20, and R26 due to the new noise barrier. Noise levels would increase at a few receptors where the noise barrier would not be effective, such as R0.

Table 7 Alternative 3 Noise Levels with South Apron Extension and 15-foot Wall

Receptor	Address	Existing Noise Level (Lmax, dBA)	Alternative 3 Noise Level (Lmax, dBA)	Noise Increase (Lmax, dBA)
R-0	1R MONOHANSETT RD	51	54	3
R-1	3 MONOHANSETT RD	50	52	2
R-2	47 OKORWAW AV	52	54	2
R-3	49 OKORWAW AV	56	55	-1
R-4	5 MONOHANSETT RD	51	52	1
R-5	41 OKORWAW AV	50	51	1
R-6	51 OKORWAW AV	58	54	-4
R-7	15 MONOHANSETT RD	57	56	-1
R-8	OKORWAW AV	58	57	-1
R-9	7 MONOHANSETT RD	54	53	-1
R-10	31 MONOHANSETT RD	59	58	-2
R-11	48 OKORWAW AV	56	54	-1
R-12	25 MONOHANSETT RD	58	58	1
R-13	46 OKORWAW AV	54	55	1
R-14	26 MONOHANSETT RD	56	57	1
R-15	38 MONOHANSETT RD	65	62	-3
R-16	20 MONOHANSETT RD	55	55	0
R-17	2 WEBSTER RD	57	58	1
R-18	3 WEBSTER RD	60	60	0
R-19	65 SKYLINE DR	58	58	1
R-20	83 SKYLINE DR	69	65	-4
R-21	5 WEBSTER RD	62	61	-2
R-22	77 SKYLINE DR	66	62	-4
R-23	87 A SKYLINE DR	72	66	-6
R-24	5 WEBSTER RD	63	60	-2
R-25	90 SKYLINE DR	72	67	-5
R-26	42 MONOHANSETT RD	74	68	-6
R-27	84 SKYLINE DR	68	64	-4
R-28	78 A SKYLINE DR #1	66	62	-3
R-29	2 EVERGREEN WY	72	72	0
R-30	4A EVERGREEN WY	69	65	-4
R-31	8 EVERGREEN WY	66	62	-3
R-32	4 EVERGREEN WY	69	65	-4
R-33	6 EVERGREEN WY	67	63	-4
R-34	3 EVERGREEN WY	66	66	0
R-35	1 EVERGREEN WY	64	64	0
R-36	1 DAFFODIL LN	64	61	-3
R-37	3 DAFFODIL LN	63	60	-3

Source: VHB, 2020.



Ground Noise Sources

- Jet APU
- Jet Taxing
- Prop Startup
- South Apron Expansion
- Receptors
- Noise Barrier (Proposed)

Ground Noise Level (Lmax, dBA)

- 50 dBA
- 55 dBA
- 60 dBA
- 65 dBA
- 70 dBA
- 75 dBA
- 80 dBA
- 85 dBA
- 90 dBA

ACK South Apron Noise Study

Figure 15
Alternative 3
South Apron Extension With 15-foot Wall

0 140 280 560 840 1,120 Feet

Data Sources: MassGIS, Jacobs, VHB

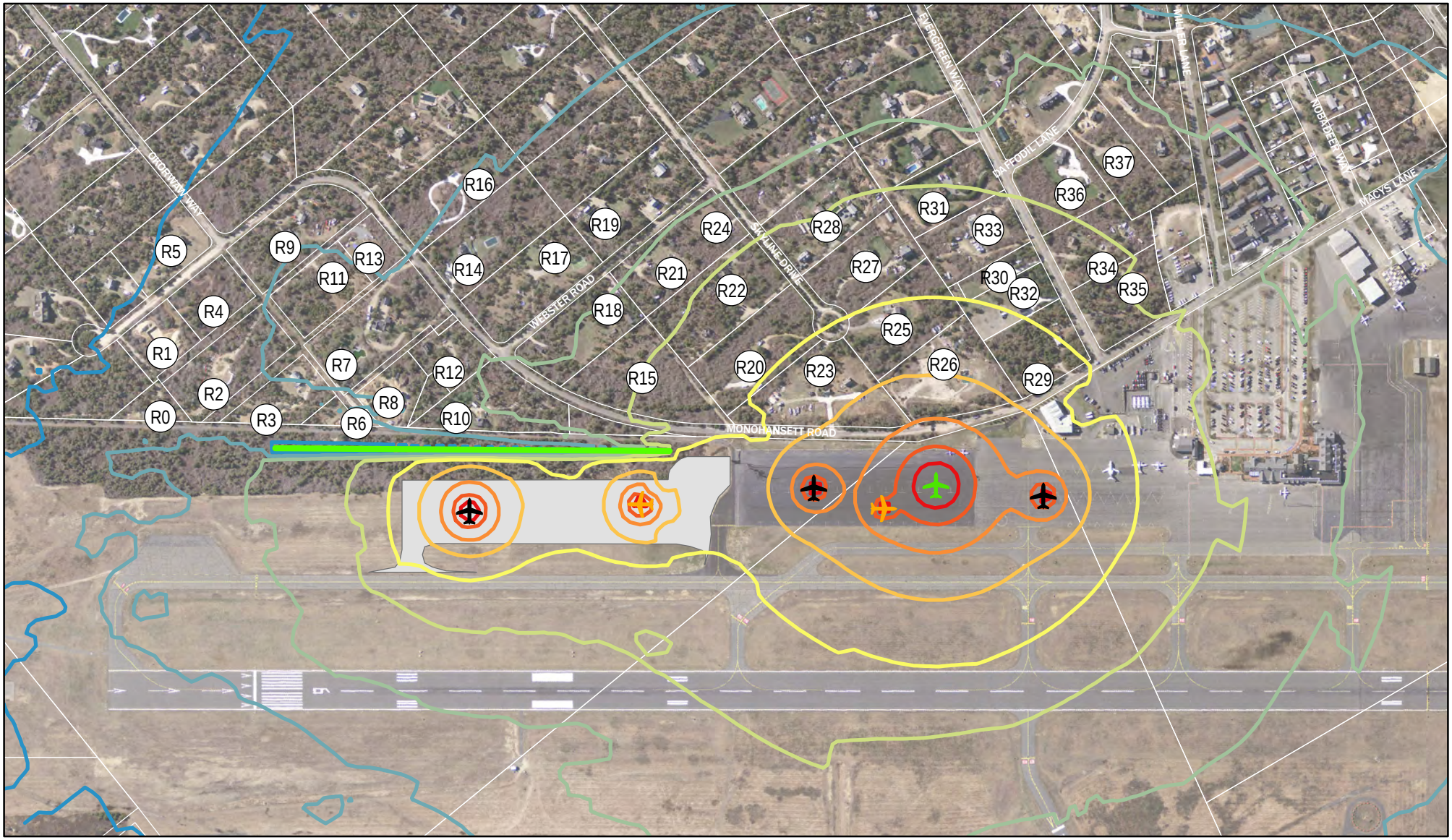
4.6 Alternative 4

As shown in Table 8 and Figure 16, noise from ground operations would range from 50 to 74 dBA (Lmax) with the South Apron extension, with an APU and a jet taxing on the extension, and a 1,500-foot long and 15-foot tall earthen berm with 2:1 slope on both sides. Ground noise levels would not change relative to existing conditions at many receptors near the existing apron. Noise levels would decrease 3 to 4 dBA at receptors, such as R3, R6, R8, and R10 that would be behind the proposed berm.

Table 8 Alternative 4 Noise Levels with South Apron Extension and 15-foot Berm

Receptor	Address	Existing Noise Level (Lmax, dBA)	Alternative 4 Noise Level (Lmax, dBA)	Noise Increase (Lmax, dBA)
R-0	1R MONOHANSETT RD	51	52	2
R-1	3 MONOHANSETT RD	50	51	1
R-2	47 OKORWAW AV	52	53	1
R-3	49 OKORWAW AV	56	53	-4
R-4	5 MONOHANSETT RD	51	52	1
R-5	41 OKORWAW AV	50	50	1
R-6	51 OKORWAW AV	58	54	-4
R-7	15 MONOHANSETT RD	57	57	0
R-8	OKORWAW AV	58	55	-3
R-9	7 MONOHANSETT RD	54	54	0
R-10	31 MONOHANSETT RD	59	56	-3
R-11	48 OKORWAW AV	56	56	0
R-12	25 MONOHANSETT RD	58	58	0
R-13	46 OKORWAW AV	54	54	0
R-14	26 MONOHANSETT RD	56	56	0
R-15	38 MONOHANSETT RD	65	65	0
R-16	20 MONOHANSETT RD	55	55	0
R-17	2 WEBSTER RD	57	57	0
R-18	3 WEBSTER RD	60	60	0
R-19	65 SKYLINE DR	58	58	0
R-20	83 SKYLINE DR	69	69	0
R-21	5 WEBSTER RD	62	62	0
R-22	77 SKYLINE DR	66	66	0
R-23	87 A SKYLINE DR	72	72	0
R-24	5 WEBSTER RD	63	63	0
R-25	90 SKYLINE DR	72	72	0
R-26	42 MONOHANSETT RD	74	74	0
R-27	84 SKYLINE DR	68	68	0
R-28	78 A SKYLINE DR #1	66	66	0
R-29	2 EVERGREEN WY	72	72	0
R-30	4A EVERGREEN WY	69	69	0
R-31	8 EVERGREEN WY	66	66	0
R-32	4 EVERGREEN WY	69	69	0
R-33	6 EVERGREEN WY	67	67	0
R-34	3 EVERGREEN WY	66	66	0
R-35	1 EVERGREEN WY	64	64	0
R-36	1 DAFFODIL LN	64	64	0
R-37	3 DAFFODIL LN	63	63	0

Source: VHB, 2020.



Ground Noise Sources

- Jet APU
- Jet Taxing
- Prop Startup
- South Apron Expansion
- Receptors
- Berm

Ground Noise Level (Lmax, dBA)

- 50 dBA
- 55 dBA
- 60 dBA
- 65 dBA
- 70 dBA
- 75 dBA
- 80 dBA
- 85 dBA
- 90 dBA

ACK South Apron Noise Study

Figure 16
Alternative 4
South Apron Extension With 15-foot Berm

0 140 280 560 840 1,120 Feet

Data Sources: MassGIS, Jacobs, VHB

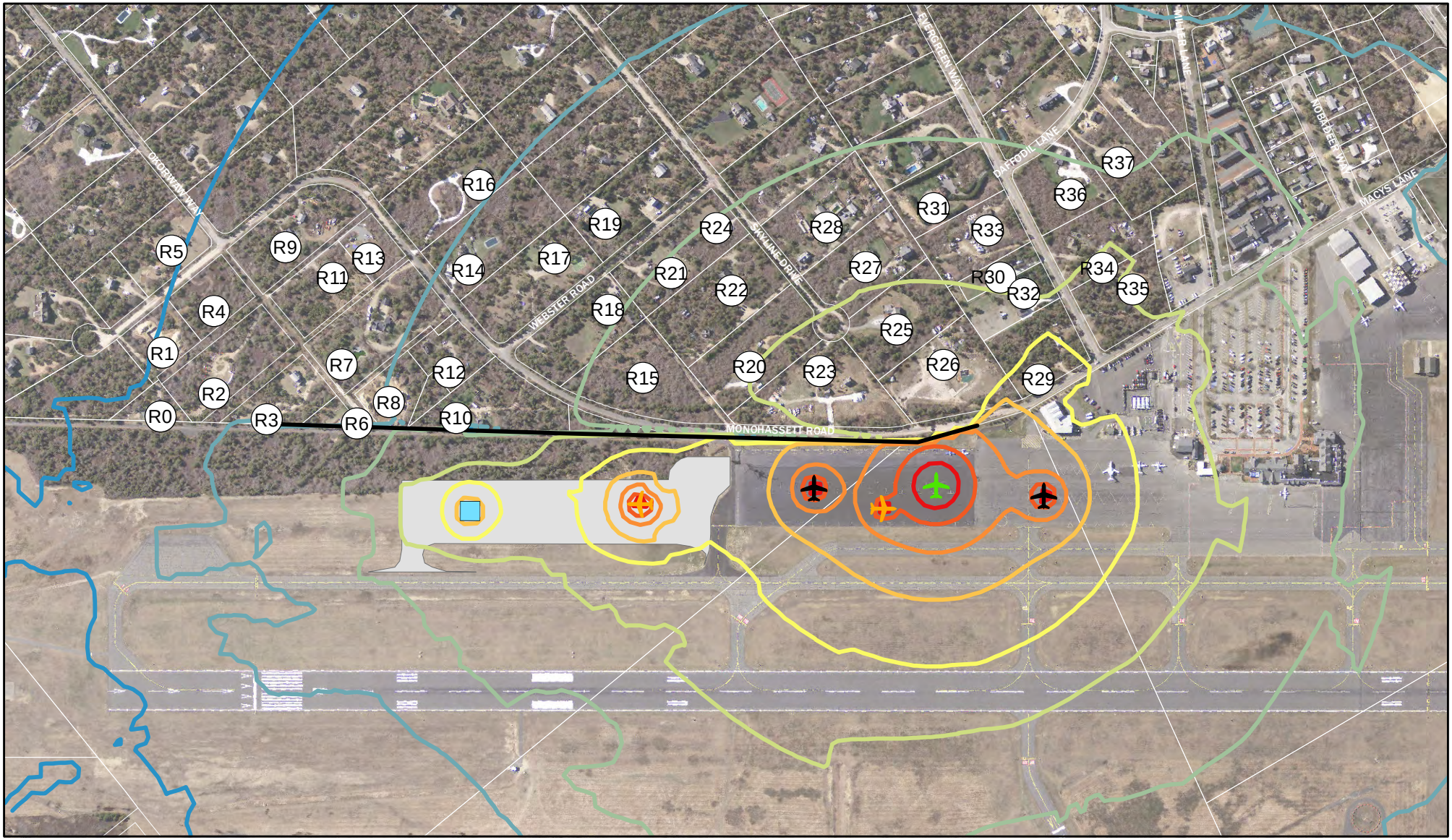
4.7 Alternative 5

As shown in Table 9 and Figure 17, noise from ground operations range from 50 to 72 dBA (Lmax) with the proposed South Apron extension including a 2,600-foot long and 15-foot tall noise barrier and using a GPU on the expansion in lieu of an APU. Ground noise levels would only increase up to 1 dBA at one receptor (R0) and would decrease up to 6 dBA at other receptors. The greatest reduction would be at receptors such as R23, R25, and R26.

Table 9 Alternative 5 Noise Levels with South Apron Extension

Receptor	Address	Existing Noise Level (Lmax, dBA)	Alternative 5 Noise Level (Lmax, dBA)	Noise Increase (Lmax, dBA)
R-0	1R MONOHANSETT RD	51	51	1
R-1	3 MONOHANSETT RD	50	50	0
R-2	47 OKORWAW AV	52	51	-1
R-3	49 OKORWAW AV	56	53	-3
R-4	5 MONOHANSETT RD	51	51	-1
R-5	41 OKORWAW AV	50	50	0
R-6	51 OKORWAW AV	58	54	-4
R-7	15 MONOHANSETT RD	57	54	-3
R-8	OKORWAW AV	58	55	-3
R-9	7 MONOHANSETT RD	54	52	-2
R-10	31 MONOHANSETT RD	59	57	-3
R-11	48 OKORWAW AV	56	53	-3
R-12	25 MONOHANSETT RD	58	56	-1
R-13	46 OKORWAW AV	54	53	-1
R-14	26 MONOHANSETT RD	56	56	-1
R-15	38 MONOHANSETT RD	65	62	-3
R-16	20 MONOHANSETT RD	55	55	-1
R-17	2 WEBSTER RD	57	57	0
R-18	3 WEBSTER RD	60	60	-1
R-19	65 SKYLINE DR	58	58	0
R-20	83 SKYLINE DR	69	65	-4
R-21	5 WEBSTER RD	62	60	-2
R-22	77 SKYLINE DR	66	62	-4
R-23	87 A SKYLINE DR	72	66	-6
R-24	5 WEBSTER RD	63	60	-2
R-25	90 SKYLINE DR	72	67	-5
R-26	42 MONOHANSETT RD	74	68	-6
R-27	84 SKYLINE DR	68	64	-4
R-28	78 A SKYLINE DR #1	66	62	-3
R-29	2 EVERGREEN WY	72	72	0
R-30	4A EVERGREEN WY	69	65	-4
R-31	8 EVERGREEN WY	66	62	-4
R-32	4 EVERGREEN WY	69	65	-4
R-33	6 EVERGREEN WY	67	63	-4
R-34	3 EVERGREEN WY	66	66	0
R-35	1 EVERGREEN WY	64	64	0
R-36	1 DAFFODIL LN	64	61	-3
R-37	3 DAFFODIL LN	63	60	-3

Source: VHB, 2020.



Ground Noise Sources

- Jet APU
- Jet Taxiing
- Prop Startup
- Ground Power Unit
- South Apron Expansion
- Receptors

Ground Noise Level (Lmax, dBA)

- 50 dBA
- 55 dBA
- 60 dBA
- 65 dBA
- 70 dBA
- 75 dBA
- 80 dBA
- 85 dBA
- 90 dBA
- Noise Barrier (Proposed)

ACK South Apron Noise Study

Figure 17
Alternative 5
South Apron Extension With
15-foot Wall and GPU

0 140 280 560 840 1,120 Feet

Data Sources: MassGIS, Jacobs, VHB

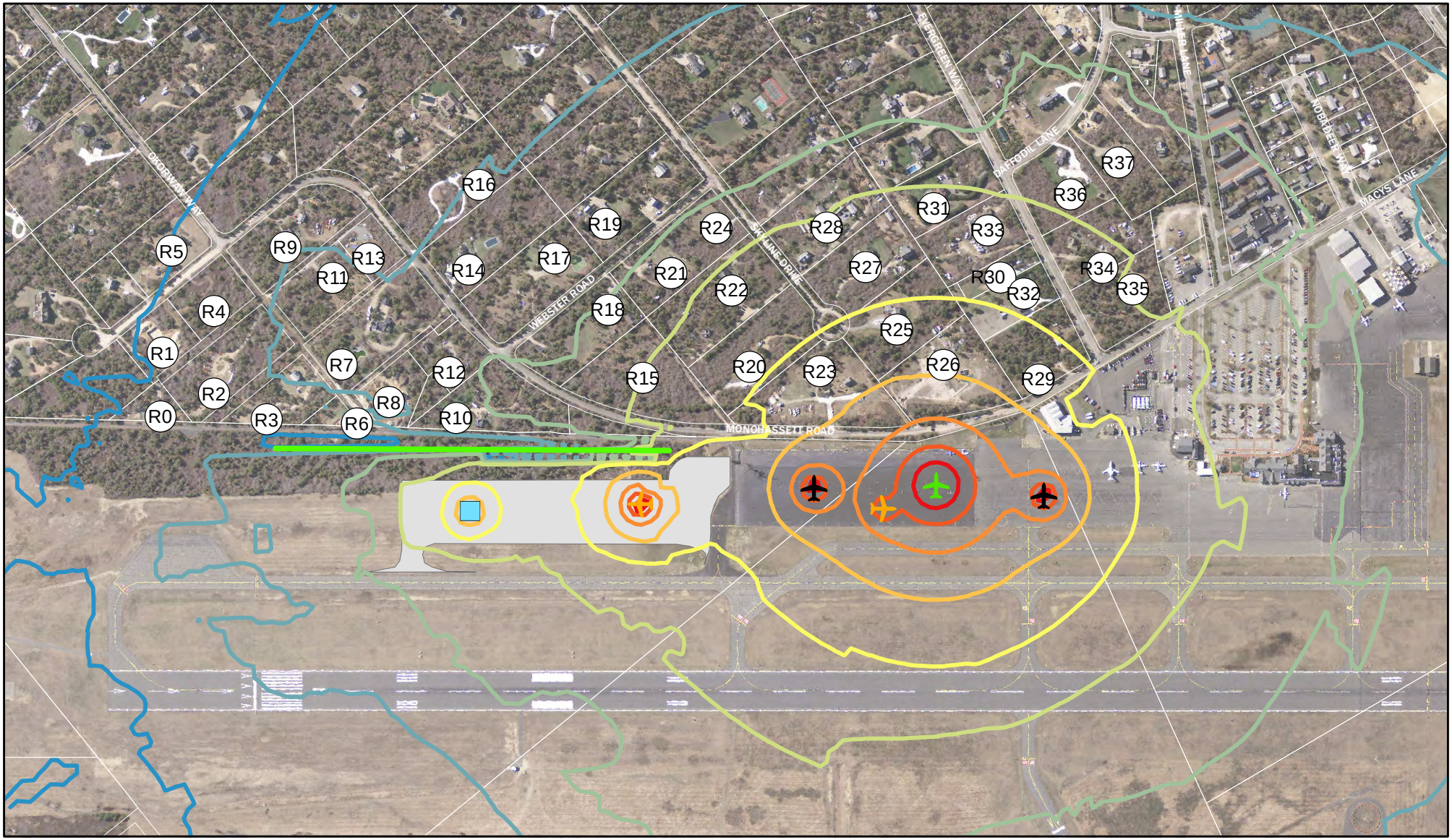
4.8 Alternative 6

As shown in Table 10 and Figure 18, noise from ground operations range from 50 to 74 dBA (Lmax) with the proposed South Apron extension including a 1,500-foot long and 15-foot tall earthen berm with 2:1 slope and replacing all the APUs with GPUs. Ground noise levels would only increase up to 1 dBA at one receptor (R2) and would decrease up to 4 dBA at other receptors. The greatest noise reduction would be at receptors such as R3, R6, and R8.

Table 10 Alternative 6 Noise Levels with South Apron Extension

Receptor	Address	Existing Noise Level (Lmax, dBA)	Alternative 6 Noise Level (Lmax, dBA)	Noise Increase (Lmax, dBA)
R-0	1R MONOHANSETT RD	51	51	0
R-1	3 MONOHANSETT RD	50	51	0
R-2	47 OKORWAW AV	52	53	1
R-3	49 OKORWAW AV	56	53	-4
R-4	5 MONOHANSETT RD	51	52	0
R-5	41 OKORWAW AV	50	50	1
R-6	51 OKORWAW AV	58	54	-4
R-7	15 MONOHANSETT RD	57	56	0
R-8	OKORWAW AV	58	55	-3
R-9	7 MONOHANSETT RD	54	54	0
R-10	31 MONOHANSETT RD	59	56	-3
R-11	48 OKORWAW AV	56	56	0
R-12	25 MONOHANSETT RD	58	58	0
R-13	46 OKORWAW AV	54	54	0
R-14	26 MONOHANSETT RD	56	56	0
R-15	38 MONOHANSETT RD	65	65	0
R-16	20 MONOHANSETT RD	55	55	0
R-17	2 WEBSTER RD	57	57	0
R-18	3 WEBSTER RD	60	60	0
R-19	65 SKYLINE DR	58	58	0
R-20	83 SKYLINE DR	69	69	0
R-21	5 WEBSTER RD	62	62	0
R-22	77 SKYLINE DR	66	66	0
R-23	87 A SKYLINE DR	72	72	0
R-24	5 WEBSTER RD	63	63	0
R-25	90 SKYLINE DR	72	72	0
R-26	42 MONOHANSETT RD	74	74	0
R-27	84 SKYLINE DR	68	68	0
R-28	78 A SKYLINE DR #1	66	66	0
R-29	2 EVERGREEN WY	72	72	0
R-30	4A EVERGREEN WY	69	69	0
R-31	8 EVERGREEN WY	66	66	0
R-32	4 EVERGREEN WY	69	69	0
R-33	6 EVERGREEN WY	67	67	0
R-34	3 EVERGREEN WY	66	66	0
R-35	1 EVERGREEN WY	64	64	0
R-36	1 DAFFODIL LN	64	64	0
R-37	3 DAFFODIL LN	63	63	0

Source: VHB, 2020.



Ground Noise Sources

- Jet APU
- Jet Taxiing
- Prop Startup
- Ground Power Unit
- South Apron Expansion
- Receptors

Ground Noise Level (Lmax, dBA)

- 50 dBA
- 55 dBA
- 60 dBA
- 65 dBA
- 70 dBA
- 75 dBA
- 80 dBA
- 85 dBA
- 90 dBA
- Berm

ACK South Apron Noise Study

Figure 18
Alternative 6
South Apron Extension With
15-foot Berm and GPU

0 140 280 560 840 1,120
Feet

Data Sources: MassGIS, Jacobs, VHB

5

Conclusions

VHB has conducted a noise study for the proposed South Apron Extension Project and has evaluated the potential changes in noise from aircraft ground operations and the noise reduction that would be provided by an operational change to use a GPU unit on the apron extension in lieu of an APU (Alternative 2), a potential perimeter noise barrier (Alternative 3), a potential earthen berm (Alternative 4), replacing all APUs with GPUs and the noise barrier (Alternative 5), and replacing all APUs with GPUS and the earthen berm (Alternative 6).

The principal conclusions of the analysis are as follows:

- The predominant source of noise at the measurement locations including M1, M2, and M3 was from ground operations. Aircraft takeoffs and landings were audible but were typically not the predominant source of noise unless there were minimal ground operations occurring.
- Measured noise levels were DNL 62.2 dBA at the Boundary Road Site (M1), DNL 76.3 dBA at the South Apron Site (M2), and DNL 80.6 dBA at the ARFF station (M3). The measurement results indicate that noise levels were approximately DNL 14 dBA higher at the South Apron site compared to the Boundary Road site and observations indicate this difference was primarily attributed to ground operations.
- Measurements of APUs, GPUs, aircraft taxiing, and startups were conducted during the attended measurements at sites M4 and M5. The maximum noise levels of typical ground noise sources, as measured at distances of 30 to 40 meters, were approximately 67 dBA for the GPU, 82 dBA for APU, 90 dBA for the twin-engine prop start-up, and 78 dBA for the jet taxiing. Comparing the estimated sound power level of each source is a way to measure the total sound energy that is emitted independent of distance. The estimated sound power levels for these sources was

107 dBA for the GPU, 116 dBA for the jet taxiing, 119 dBA for the APU, and 130 dBA for the twin-engine start-up.

- There are approximately 38 single-family residences within 1,000 feet of the existing South Apron and proposed South Apron extension on Monohansett Road, Webster Road, Okorwaw Way, Skyline Drive, Skyline Drive, Daffodil Lane, and Evergreen Way.
- Noise modeling of typical ground operations show that ground noise ranges from 50 to 74 dBA (Lmax) at these receptors with the highest noise levels occurring at residences closest to the existing South Apron. For reference, an exterior noise level of 74 dBA is similar to the noise generated by a vacuum cleaner at 10 feet.
- With Alternative 1, which includes the proposed South Apron extension with an additional APU and jet taxiing, ground noise levels would range from 51 to 74 dBA. Ground noise levels would increase 6 to 8 dBA at a few receptors, such as R8, R10, and R12 which are near the extension.
- With Alternative 2, which includes the proposed South Apron extension with an additional GPU and jet taxiing, ground noise levels would range from 50 to 74 dBA. Ground noise would only increase 1 to 2 dBA at receptors near the South Apron extension. By replacing the aircraft-mounted APU with a GPU, this Alternative would result in substantially lower sound levels than Alternative 1 for receptors near the proposed extension.
- With Alternative 3, which includes the proposed South Apron extension assuming an APU and jet taxiing and a 2,600-foot long and 15-foot tall perimeter noise barrier, ground noise levels would range from 51 to 72 dBA. Ground noise levels would decrease by 3 to 6 dBA at several receptors due to the new noise barrier. Noise levels would still increase at a few receptors by 1 to 3 dBA at locations where the noise barrier would not be as effective.
- With Alternative 4, which includes the proposed South Apron extension assuming an APU and jet taxiing and a 1,500-foot long and 15-foot tall earthen berm with a 2:1 slope on both sides, noise levels would decrease 3 to 4 dBA at receptors behind the proposed berm.
- With Alternative 5, which includes the proposed South Apron extension, the noise barrier, and using a GPU in lieu of an APU on the apron expansion, ground noise levels would range from 50 to 72 dBA. Ground noise levels would only increase up to 1 dBA at one receptor (R0) and would decrease up to 6 dBA at other receptors.
- With Alternative 6, which includes the proposed South Apron extension, the earthen berm, and using a GPU in lieu of an APU on the apron expansion, ground noise levels would range from 50 to 74 dBA. Ground noise levels would only increase up to 1 dBA at one receptor (R2) and would decrease up to 4 dBA at other receptors.
- It is not feasible to construct an earthen berm along the entire South Apron such as a perimeter noise barrier. The proposed noise barrier would typically provide up to 9 dBA of noise reduction for the closest receptors. The earthen berm is slightly more effective (approximately 1 dBA) and would provide up to 10 dBA of noise reduction at the closest receptors.

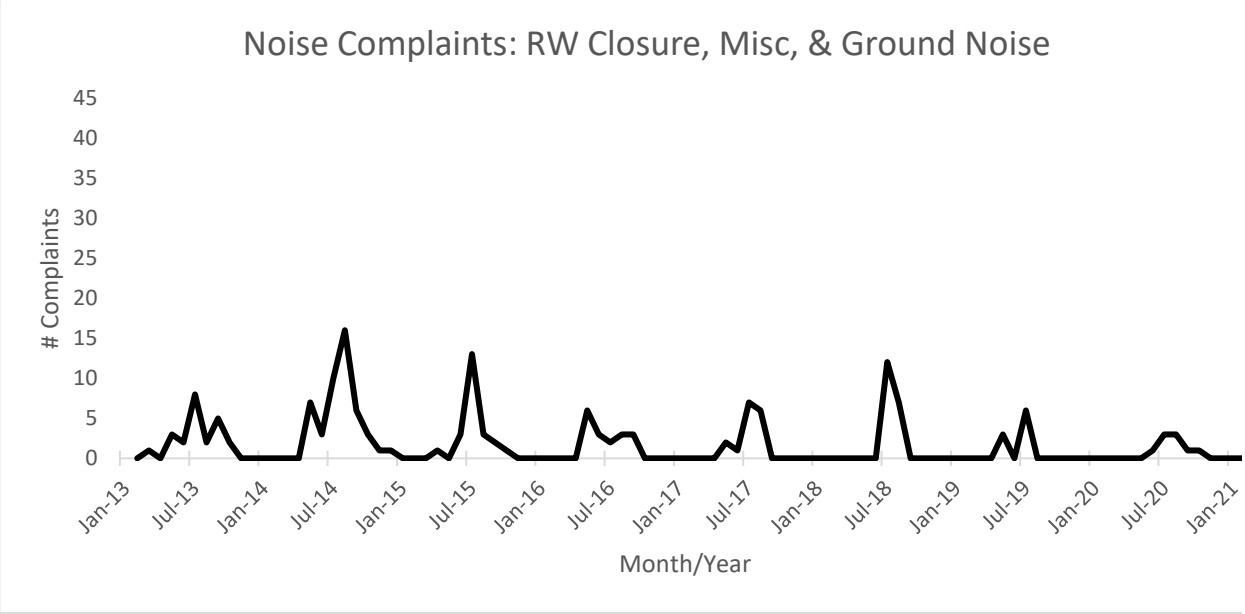
Created By	Date Modified	Container	Tail Number	Type of Aircraft	Reported By	Was PIC Advice of APU Limitation?	Did PIC Comply with APU Limitation?	Explain reason for Non-Compliance	Select One	Remarks
Addison Falconer	10/4/2020 12:17	ACK - Daily Operations	N502QS	Citation Latitude	A. Falconer	Yes	Yes		First Warning	
Addison Falconer	10/4/2020 12:15	ACK - Daily Operations	N818KF	Falcon 900	A. Falconer	Yes	Yes		First Warning	
B.Buckley	10/3/2020 13:52	ACK - Daily Operations	N388AC	G5	S.Nelson	Yes			First Warning	
Shanroy Nelson	9/19/2020 17:25	ACK - Daily Operations	N818KF	FALCON 50	SHANROY NELSON	Yes	Yes		First Warning	
Shanroy Nelson	9/19/2020 17:23	ACK - Daily Operations	N218KD	G4	SHANROY NELSON	Yes	Yes		First Warning	
Shanroy Nelson	9/19/2020 17:22	ACK - Daily Operations	N856T	GALAXY 200	SHANROY NELSON	Yes	Yes		First Warning	
Shanroy Nelson	9/19/2020 17:19	ACK - Daily Operations	N521FX	CL30	SHANROY NELSON	Yes	No	GETTING FUEL AND LEAVING	First Warning	
Shanroy Nelson	9/19/2020 17:15	ACK - Daily Operations	N551TG	G5	SHANROY NELSON	Yes	No	WE ARE HERE ON A SUPER QUICK TURN	First Warning	
Shanroy Nelson	9/19/2020 17:14	ACK - Daily Operations	N651WE	G6	SHANROY NELSON	Yes	No	WE ARE ON A QUICK TURN	First Warning	
B.Buckley	9/17/2020 10:03	ACK - Daily Operations	N90LB	F- 900	B.Buckley	Yes				APU was turned off shortly after arrival on ramp
F. Wellington	9/13/2020 9:29	ACK - Daily Operations	N936MP	G 1V	Addison Falconer	Yes	Yes		First Warning	
B.Buckley	9/12/2020 11:04	ACK - Daily Operations	N546AD	Challenger 300	A.Falconer	Yes				
B.Buckley	9/12/2020 8:56	ACK - Daily Operations	N380ER	G-650	B.Buckley	Yes				
B.Buckley	9/12/2020 8:56	ACK - Daily Operations	N611TX	Falcon 900	A.Falconer	Yes				
Nolan Spence	9/7/2020 17:17	ACK - Daily Operations	N933EY	Global	NS	Yes	Yes		First Warning	
Nolan Spence	9/7/2020 16:03	ACK - Daily Operations	N885AR	G550	NS	Yes	Yes		First Warning	
Nolan Spence	9/7/2020 15:55	ACK - Daily Operations	N617CB	Citation XL	NS	Yes	Yes		First Warning	
Nolan Spence	9/7/2020 15:51	ACK - Daily Operations	N651WE	Gulfstream 650	NS	Yes	Yes		First Warning	
F. Wellington	9/5/2020 16:09	ACK - Daily Operations	N645QS	Citation latitude	Frederick Wellington	Yes	Yes		First Warning	
B.Buckley	9/2/2020 9:43	ACK - Daily Operations	N48MF	F-2000	F.Wellington	Yes				pic stated they will be leaving soon, pax should be here
B.Buckley	9/2/2020 9:42	ACK - Daily Operations	N48MF	F-2000	F.Wellington	Yes				pic stated they will be leaving soon, pax should be here
Nolan Spence	9/1/2020 18:08	ACK - Daily Operations	N523DJ	Facon 900	NS	Yes	No	waiting on fuel	First Warning	
F. Wellington	9/1/2020 17:57	ACK - Daily Operations	N933EY	Global	Frederick Wellington	Yes	No	Pic stated that his pax should be showing up shortly	First Warning	
F. Wellington	9/1/2020 16:50	ACK - Daily Operations	N502BG	Falcon 2000	Frederick Wellington	Yes	Yes		First Warning	
B.Buckley	9/1/2020 10:33	ACK - Daily Operations	N650TB	E-135	B.Buckley	Yes				
Addison Falconer	8/30/2020 10:08	ACK - Daily Operations	N83JJ	Global 3000	A. Falconer	Yes	Yes		First Warning	
Addison Falconer	8/30/2020 9:30	ACK - Daily Operations	N585FX	Challenger 300	S. Nelson	Yes	Yes		First Warning	
Addison Falconer	8/30/2020 9:12	ACK - Daily Operations	N335LL	Gulfstream 5	A. Falconer	Yes	Yes		First Warning	
Addison Falconer	8/30/2020 9:12	ACK - Daily Operations	N300CR	Falcon 7X	A. Falconer	Yes	Yes		First Warning	
B.Buckley	8/29/2020 11:49	ACK - Daily Operations	N899SC	G-280	S.Nelson	Yes				PIC stated that they are leaving as soon as they get fuel
B.Buckley	8/29/2020 10:11	ACK - Daily Operations	N900LC	F900	S.Nelson	Yes				apu was shut off
B.Buckley	8/29/2020 9:47	ACK - Daily Operations	N776RG	G5	A.Falconer	Yes				
B.Buckley	8/29/2020 8:55	ACK - Daily Operations	N385QS	citation sovereign	A.Falconer	Yes				pic stated that they are leaving in 30 minutes
Addison Falconer	8/28/2020 22:55	ACK - Daily Operations	N123KH	Falcon 2000	A. Falconer	Yes	Yes		First Warning	
Addison Falconer	8/28/2020 21:50	ACK - Daily Operations	N626GD	Gulfstream 650	A. Falconer	Yes	Yes		First Warning	
Addison Falconer	8/28/2020 18:12	ACK - Daily Operations	N385QS	Citation Sovereign	A. Falconer	Yes	Yes		First Warning	
Addison Falconer	8/28/2020 17:58	ACK - Daily Operations	N388MM	Gulfstream 3	A. Falconer	Yes	Yes		First Warning	
Addison Falconer	8/28/2020 17:43	ACK - Daily Operations	N97DK	Challenger 300	A. Falconer	Yes	Yes		First Warning	
Addison Falconer	8/28/2020 17:28	ACK - Daily Operations	N503QS	Citation Latitude	A. Falconer	Yes	Yes		First Warning	
Timothy Mooney	8/28/2020 6:45	ACK - Daily Operations	N421QS	GLF4	Tmooney	Yes	Yes			Pilots expressed need for A/C gpu to comply with noise restrictions
Addison Falconer	8/27/2020 22:30	ACK - Daily Operations	N605BS	Challenger 600	A. Falconer	Yes	Yes		First Warning	
Addison Falconer	8/27/2020 22:21	ACK - Daily Operations	N804QS	Citation Longtitude	A. Falconer	Yes	Yes		First Warning	
Addison Falconer	8/27/2020 21:21	ACK - Daily Operations	N369QS	Citation Sovereign	A. Falconer	Yes	Yes		First Warning	
Addison Falconer	8/27/2020 20:49	ACK - Daily Operations	N594QS	Citation XL	A. Falconer	Yes	Yes		First Warning	
B.Buckley	8/27/2020 12:15	ACK - Daily Operations	N427FX	L550	D.Spence	Yes			First Warning	
B.Buckley	8/27/2020 11:35	ACK - Daily Operations	N421QS	G4	Ben	Yes				pic advised of apu restriction upon arrival
B.Buckley	8/27/2020 8:41	ACK - Daily Operations	N499WR	Global 5000	Ben	Yes				pic advised of APU restriction upon arrival
Durand Spence	8/26/2020 15:02	ACK - Daily Operations	N318GA	Falcon 900	preston	Yes	Yes		Second Warning	
B.Buckley	8/26/2020 14:39	ACK - Daily Operations	N318GA	FA50	ben	Yes	No	Pilot Said "OK"	First Warning	
B.Buckley	8/26/2020 13:14	ACK - Daily Operations	N335LL	G5	B.Buckley	Yes				pic stated that he is going to walk the pax to the fbo, pay the bill and leave.
B.Buckley	8/25/2020 7:06	ACK - Daily Operations	N712AG	Challenger	B.Buckley	Yes				PIC advised on unicom upon entering the ramp
Timothy Mooney	8/25/2020 4:26	ACK - Daily Operations	NiMG	C25C	Tmooney	Yes	Yes			notified of restriction before departure
F. Wellington	8/24/2020 16:59	ACK - Daily Operations	N311QS	Citation Sovereign	Frederick Wellington	Yes	Yes		First Warning	
Nolan Spence	8/24/2020 15:32	ACK - Daily Operations	N651WE	G650	NS	Yes	Yes		First Warning	
Nolan Spence	8/24/2020 15:25	ACK - Daily Operations	N321AK	F900	NS	Yes	Yes		First Warning	
Nolan Spence	8/24/2020 15:24	ACK - Daily Operations	N411FX	Embraer Legacy 450	NS	Yes	Yes		First Warning	
Nolan Spence	8/23/2020 16:57	ACK - Daily Operations	N98MH	F900	NS	Yes	Yes		First Warning	
Addison Falconer	8/23/2020 14:28	ACK - Daily Operations	N617MW	Citation XL	A. Falconer	Yes	Yes		First Warning	
Addison Falconer	8/23/2020 12:51	ACK - Daily Operations	N92CJ	Falcon 50	A. Falconer	Yes	Yes		First Warning	
Addison Falconer	8/23/2020 12:05	ACK - Daily Operations	N609RC	Hawker	A. Falconer	Yes	Yes		First Warning	

Addison Falconer	8/23/2020 11:41	ACK - Daily Operations	N27YA	Gulfstream 4	A. Falconer	Yes	Yes		First Warning	
B.Buckley	8/22/2020 10:38	ACK - Daily Operations	N407FX	Challenger	A.Falconer	Yes			First Warning	pic stated that they are leaving in 45 minutes
Addison Falconer	8/21/2020 18:42	ACK - Daily Operations	N451BH	Gulfstream 4	Shanroy Nelson	Yes	Yes		First Warning	
Timothy Mooney	8/20/2020 6:21	ACK - Daily Operations	N141QS	GLEX	Tim Mooney	Yes	No	Takes 30 minutes to reboot aircraft systems. Pilots requested AC Apu, airport needs to procure AC units to supply aircraft with power		
B.Buckley	8/19/2020 12:20	ACK - Daily Operations	N296L	Lear 60	F.Wellington	Yes			First Warning	PIC stated pax will be arriving in 10 minutes for departure.
Timothy Mooney	8/19/2020 6:20	ACK - Daily Operations	N111QS	GLF5	TMooney	Yes	No	Takes 30 minutes for aircraft system reboot		Discussed with pilots at length about A/C power unit would enable pilots to adhered to APU restrictions. Airport requires procurement of A/C cart
Nolan Spence	8/18/2020 20:19	ACK - Daily Operations	N53HA	Citation XL	NS	Yes	Yes		First Warning	
Nolan Spence	8/18/2020 17:03	ACK - Daily Operations	N491J	CJ3	NS	Yes	Yes		First Warning	
F. Wellington	8/18/2020 16:47	ACK - Daily Operations	N790XJ	Citation 10	Frederick Wellington	Yes	Yes		First Warning	
F. Wellington	8/18/2020 15:53	ACK - Daily Operations	N898TX	Hawker 400	Frederick Wellington	Yes	No	Quick turn, just paying and leaving	First Warning	
B.Buckley	8/18/2020 12:30	ACK - Daily Operations	N539XJ	Challenger 300	P.Harimon	Yes				
B.Buckley	8/18/2020 12:28	ACK - Daily Operations	N759QS	Challenger 350	B.Buckley	Yes			First Warning	
Shanroy Nelson	8/17/2020 12:39	ACK - Daily Operations	N551SD	CL60		Yes	Yes		First Warning	
Shanroy Nelson	8/17/2020 12:39	ACK - Daily Operations	N551TG	GV		Yes	No	PILOT SAID OK	First Warning	
Shanroy Nelson	8/17/2020 11:34	ACK - Daily Operations	N692QS	LATITUDE		Yes	No	PILOT SAID OK	First Warning	
Shanroy Nelson	8/17/2020 11:31	ACK - Daily Operations	N28PH	FALCON 900		Yes	Yes		First Warning	
Nolan Spence	8/16/2020 17:19	ACK - Daily Operations	N2HC	Gulfstream 4	NS	Yes	No	Pax should be here shortly	First Warning	
Addison Falconer	8/16/2020 14:22	ACK - Daily Operations	N805QS	Citation Longitude	Shanroy Nelson	Yes	Yes		First Warning	
Addison Falconer	8/16/2020 13:11	ACK - Daily Operations	N900PE	Hawker	Addison Falconer	Yes	Yes		First Warning	
Addison Falconer	8/16/2020 12:59	ACK - Daily Operations	N423FX	Legacy 450	Addison Falconer	Yes	Yes		First Warning	
Addison Falconer	8/16/2020 12:57	ACK - Daily Operations	N372MZ	Challenger	Shanroy Nelson	Yes	Yes		First Warning	
Addison Falconer	8/16/2020 11:42	ACK - Daily Operations	N549FX	Challenger	Addison Falconer	Yes	Yes		First Warning	
Nolan Spence	8/15/2020 16:18	ACK - Daily Operations	N80AE	Citation XL	NS	Yes	No	After fuel they will leave	First Warning	
Nolan Spence	8/15/2020 16:07	ACK - Daily Operations	N405QS	G4	NS	Yes	No	Getting ready to start in a few mins	First Warning	
B.Buckley	8/15/2020 12:53	ACK - Daily Operations	N502UP	Citation X	S.nelson	Yes				
B.Buckley	8/15/2020 12:20	ACK - Daily Operations	N907WC	Challenger 604	S.Nelson	Yes				
B.Buckley	8/15/2020 11:58	ACK - Daily Operations	N636QS	C-680A	S.Nelson	Yes				advised on arrival
B.Buckley	8/15/2020 7:30	ACK - Daily Operations	N407FX	Legacy 550	S.Nelson	Yes			First Warning	PIC said "we are leaving in 30 minutes"
Addison Falconer	8/14/2020 15:35	ACK - Daily Operations	N551SD	Challenger	Shanroy	Yes	Yes		First Warning	
Shanroy Nelson	8/13/2020 17:54	ACK - Daily Operations	N142J	CL60	Addison Falconer	Yes	Yes		First Warning	
Shanroy Nelson	8/13/2020 17:54	ACK - Daily Operations	N272TX	G4	Addison Falconer	Yes	No	On a quick turn	First Warning	
Shanroy Nelson	8/13/2020 16:58	ACK - Daily Operations	N321AK	FALCON 900		Yes	Yes		First Warning	
B.Buckley	8/10/2020 20:02	ACK - Daily Operations	N590FX	Challenger	B.Buckley	Yes			First Warning	
B.Buckley	8/10/2020 16:51	ACK - Daily Operations	N510MP	Falcon 50	B.Buckley	Yes				pic informed of apu restriction on in-bound call
B.Buckley	8/8/2020 11:15	ACK - Daily Operations	N506QS	680A	S.Nelson	Yes				pic advised on arrival
Shanroy Nelson	8/8/2020 10:09	ACK - Daily Operations	N215TM	Global Express	Shanroy Nelson	Yes	No	Passengers are here.	First Warning	
Addison Falconer	8/7/2020 17:23	ACK - Daily Operations	N511CJ	Hawker	A Falconer	Yes	Yes		First Warning	
Addison Falconer	8/6/2020 22:35	ACK - Daily Operations	N1838S	Falcon 7X	Addison Falconer	Yes	Yes		First Warning	
Shanroy Nelson	8/6/2020 18:13	ACK - Daily Operations	N510MP	FALCON 50		Yes	No	No answer from the pilot when I told him about the restrictions	First Warning	
Shanroy Nelson	8/6/2020 17:26	ACK - Daily Operations	N530FX	CL30		Yes	Yes	SHUT DOWN ONCE PARKED.	First Warning	
Shanroy Nelson	8/6/2020 17:10	ACK - Daily Operations	N752WJ	C10		Yes	No	NO RESPONSES	First Warning	
Shanroy Nelson	8/6/2020 17:07	ACK - Daily Operations	N447TR	GV		Yes	No	WONT BE HER THAT LONG	First Warning	
B.Buckley	8/6/2020 10:45	ACK - Daily Operations	N508PC	Challenger	B.Buckley	Yes				advised on arrival
B.Buckley	8/6/2020 8:58	ACK - Daily Operations	N915TP	Falcon 900	B.Buckley	Yes			First Warning	
B.Buckley	8/5/2020 12:47	ACK - Daily Operations	N314RC	Challenger	B.Buckley	Yes				Advised on arrival
Shanroy Nelson	8/2/2020 11:03	ACK - Daily Operations	N5IHH	HAWKER		Yes	No	ONCE MY CAPTAIN COME OUT WE ARE LEAVING.	First Warning	
Shanroy Nelson	8/2/2020 11:02	ACK - Daily Operations	N586FX	CL35		Yes	No	Passengers are on there way to the airport.	First Warning	
Shanroy Nelson	8/2/2020 10:58	ACK - Daily Operations	N774GT	FALCON 2000		Yes	Yes		First Warning	
Shanroy Nelson	8/2/2020 10:57	ACK - Daily Operations	N790J	FALCON 2000		Yes	No	PILOT SAID HIS PASSENGER ARE ON THE WAY.		
Shanroy Nelson	8/2/2020 10:55	ACK - Daily Operations	N405QS	G4		Yes	No	PILOT SAID OK.	First Warning	
Shanroy Nelson	8/2/2020 10:55	ACK - Daily Operations	N313RF	GLOBAL EXPRESS		Yes	Yes		First Warning	
B.Buckley	8/1/2020 8:42	ACK - Daily Operations	N2HC	G4	A.Falconer	Yes				PIC advised of restriction upon arrival,
Addison Falconer	7/31/2020 22:31	ACK - Daily Operations	N787QS	Challenger 350		Yes	Yes		First Warning	
Addison Falconer	7/31/2020 19:55	ACK - Daily Operations	N117MS	Global 5000		Yes	Yes		First Warning	
Durand Spence	7/31/2020 19:46	ACK - Daily Operations	N595pd	Haker		Yes	Yes		First Warning	
Addison Falconer	7/31/2020 18:00	ACK - Daily Operations	N46HA	Falcon 2000		Yes	Yes		First Warning	

Shanroy Nelson	7/30/2020 16:32	ACK - Daily Operations	N419FX	LEGACY 450	Yes	Yes		First Warning	
Shanroy Nelson	7/30/2020 15:46	ACK - Daily Operations	N393BZ	GLOBAL EXPRESS	Yes	No	GETTING FUEL FIRST BEFORE SHUTTING DOWN	First Warning	
Shanroy Nelson	7/30/2020 15:44	ACK - Daily Operations	N54VM	HAWKER	Yes	No	PILOT SAID HE IS ON A QUICK TURN.	First Warning	
Shanroy Nelson	7/30/2020 15:43	ACK - Daily Operations	N533VG	GV	Yes	Yes	PILOT SHUT DOWN AS SOON HE IS PARKED.	First Warning	
Durand Spence	7/30/2020 13:35	ACK - Daily Operations	N716JR	Callenger	Yes	Yes		First Warning	
B.Buckley	7/29/2020 11:34	ACK - Daily Operations	N555NE	Hawker	Yes				PIC advised on arrival
Shanroy Nelson	7/27/2020 14:41	ACK - Daily Operations	N321AK	FALCON 900	Yes	Yes	Pilot said ok.	First Warning	
Shanroy Nelson	7/27/2020 12:10	ACK - Daily Operations	N803FS	G5	Yes	Yes	PILOT SAID HE WILL DO SO.	First Warning	
Shanroy Nelson	7/27/2020 12:05	ACK - Daily Operations	N86MW	G4	Yes	Yes	AIRCRAFT SHUT DOWN.	First Warning	
Shanroy Nelson	7/27/2020 10:57	ACK - Daily Operations	N534FX	CL30	Yes	No	OK. STATED BY THE PILOT.	First Warning	
Shanroy Nelson	7/27/2020 10:53	ACK - Daily Operations	N317ML	FALCON 900	Yes	Yes	15 MINS OK THANK YOU PILOT.	First Warning	
Shanroy Nelson	7/27/2020 10:02	ACK - Daily Operations	N936MP	G4	Yes	Yes	Pilot shut down aircraft and APU as soon as hes park. 👍	First Warning	
Shanroy Nelson	7/27/2020 7:28	ACK - Daily Operations	N286BA	G280	Yes	Yes	Pilot stated she will shut it down once she is parked.	First Warning	
Addison Falconer	7/26/2020 14:02	ACK - Daily Operations	N240CX	Gulfstream 650	Yes	Yes		First Warning	
Addison Falconer	7/26/2020 13:41	ACK - Daily Operations	N763MB	Hawker	Yes	Yes		First Warning	
Addison Falconer	7/26/2020 13:41	ACK - Daily Operations	N503UP	Citation XL	Yes	Yes		First Warning	
Addison Falconer	7/26/2020 13:36	ACK - Daily Operations	N202WR	Falcon 900	Yes	Yes		First Warning	
Shanroy Nelson	7/24/2020 13:49	ACK - Daily Operations	N999EH	FALCON 900	Yes	No	WON'T BE HERE THAT LONG GOING TO GET FUEL AND HEAD BACK OUT.	First Warning	
Shanroy Nelson	7/24/2020 13:42	ACK - Daily Operations	N747QS	CL35	Yes	Yes	WE SHUTTING IT DOWN AS SOON AS THE PASSENGERS GET OFF THE PLANE.	First Warning	
Shanroy Nelson	7/24/2020 13:35	ACK - Daily Operations	N765WM	GALAXY 200	Yes	No	WON'T BE HERE FOR LONG.	First Warning	
Shanroy Nelson	7/24/2020 13:33	ACK - Daily Operations	N415FX	LEGACY 450	Yes	No	COPY THAT STATED BY THE PILOT.	First Warning	
Shanroy Nelson	7/24/2020 13:27	ACK - Daily Operations	N910CS	FALCON 2000	Yes	No	WE GOT IT 15 MINS ON THE APU VIA PILOT.	First Warning	
Shanroy Nelson	7/24/2020 9:33	ACK - Daily Operations	N86MW	G4	Yes	No	Pilot said ok when advised about the APU restrictions	First Warning	
Shanroy Nelson	7/24/2020 8:49	ACK - Daily Operations	N589FX	CL35	Yes	No	Pilot said OK after being told about the APU restrictions	First Warning	
Shanroy Nelson	7/23/2020 18:09	ACK - Daily Operations	N534FX	CL30	Yes	No	Pilot said ok	First Warning	
Shanroy Nelson	7/23/2020 17:25	ACK - Daily Operations	N933EY	GLOBAL EXPRESS	Yes	No	NO ANSWER WHEN I TOLD THE PILOT ABOUT THE APU RESTRICTIONS.	First Warning	
Shanroy Nelson	7/23/2020 16:44	ACK - Daily Operations	N650MG	FALCON 20	Yes	No	Pilot said he won't be on the ground for long.	First Warning	
Shanroy Nelson	7/23/2020 16:33	ACK - Daily Operations	N402FX	LEGACY 550	Yes	Yes	AS SOON AS THE PASSENGERS LEAVE WE WILL SHUT IT DOWN.	First Warning	
Shanroy Nelson	7/23/2020 15:38	ACK - Daily Operations	N799AG	HAWKER	Yes	No	WE WON'T BE HERE THE LONG.	First Warning	
Shanroy Nelson	7/23/2020 15:28	ACK - Daily Operations	N202WR	FALCON 900	Yes	No	HERE FOR 30 MINS	First Warning	
Nolan Spence	7/20/2020 16:01	ACK - Daily Operations	N609RC	Hawker	Yes	No	Passengers well be here soon	First Warning	
Shanroy Nelson	7/20/2020 14:04	ACK - Daily Operations	N728PH	LEGACY 135	Yes	No	WONT BE HERE FOR THAT LONG.	First Warning	
Shanroy Nelson	7/20/2020 13:57	ACK - Daily Operations	N411FX	LEGACY 550	Yes	No	PILOT SAID OK	First Warning	
Shanroy Nelson	7/20/2020 13:55	ACK - Daily Operations	N414DH	CL35	Yes	No	NOT GOING TO BE HERE FOR THAT LONG.	First Warning	
Shanroy Nelson	7/20/2020 11:02	ACK - Daily Operations	N667JD	GLOBAL EXPRESS	Yes	No	NEED 30 MINUTES.	First Warning	
Shanroy Nelson	7/20/2020 11:01	ACK - Daily Operations	N591QS	LATITUDE	Yes	No	OK we wont be long on the ground.	First Warning	
Shanroy Nelson	7/20/2020 10:09	ACK - Daily Operations	N77MC	LEGACY 450	Yes	No	SHOULD BE OUT OF HER BEFORE THEN.	First Warning	
Shanroy Nelson	7/20/2020 10:08	ACK - Daily Operations	N604PS	CL60	Yes	Yes	SHUTTING DOWN AS SOON AS THEY GET FUEL.	First Warning	
Nolan Spence	7/19/2020 17:53	ACK - Daily Operations	N407TR	G550	Yes	No		First Warning	
Nolan Spence	7/19/2020 17:49	ACK - Daily Operations	N605BS	Challenger 350	Yes	Yes		First Warning	
Addison Falconer	7/19/2020 14:39	ACK - Daily Operations	N549XJ	Challenger 300	Yes	Yes		First Warning	
Addison Falconer	7/19/2020 14:21	ACK - Daily Operations	N707QS	Challenger 350	Yes	Yes		First Warning	
Addison Falconer	7/19/2020 14:20	ACK - Daily Operations	N629DA	Falcon 900	Yes	Yes		First Warning	
Addison Falconer	7/19/2020 13:35	ACK - Daily Operations	N551TG	Gulfstream 5	Yes	Yes		First Warning	
Addison Falconer	7/18/2020 12:41	ACK - Daily Operations	N880LT	Hawker	Yes	Yes		Second Warning	
Addison Falconer	7/18/2020 12:41	ACK - Daily Operations	G-FOMO	Global Express	Yes	Yes		First Warning	
Addison Falconer	7/18/2020 12:40	ACK - Daily Operations	N453FX	Gulfstream 4	Yes	Yes		First Warning	
Shanroy Nelson	7/17/2020 13:31	ACK - Daily Operations	N418FX	LEGACY 450	Yes	Yes		First Warning	
Shanroy Nelson	7/17/2020 9:54	ACK - Daily Operations	N801AS	G5	Yes	Yes		First Warning	
Shanroy Nelson	7/17/2020 9:54	ACK - Daily Operations	N168NQ	CL60	Yes	No	DEPARTING AT 10AM. ITS NOW 910AM	First Warning	
Shanroy Nelson	7/16/2020 18:05	ACK - Daily Operations	N321AK	FALCON 900	Yes	No	WE ARE ON A QUICK TURN.	First Warning	

Shanroy Nelson	7/16/2020 17:43	ACK - Daily Operations	N418FX	LEGACY 450	Yes	Yes	First Warning	
Shanroy Nelson	7/16/2020 17:01	ACK - Daily Operations	N985AG	XL	Yes	No	PILOT DID NOT ANSWER ME WHEN I TOLD HIM ABOUT THE 15 APU RESTRICTIONS	First Warning	
Shanroy Nelson	7/16/2020 16:43	ACK - Daily Operations	N58HD	HAWKER	Yes	No	QUICK TURN.	First Warning	
Shanroy Nelson	7/16/2020 16:04	ACK - Daily Operations	N765QS	CL35	Yes	Yes	RON	First Warning	
Durand Spence	7/16/2020 11:34	ACK - Daily Operations	N910cs	Falcon	Yes	Yes		First Warning	
Shanroy Nelson	7/14/2020 18:44	ACK - Daily Operations	N799QS	CL35	Yes	No	Only on the ground for 30 minutes via pilot	First Warning	
Shanroy Nelson	7/14/2020 18:42	ACK - Daily Operations	N409FX	LEGACY 450	Yes	Yes	RON	First Warning	
Shanroy Nelson	7/14/2020 18:41	ACK - Daily Operations	N504QS	LATITUDE	Yes	Yes		First Warning	
Shanroy Nelson	7/14/2020 18:40	ACK - Daily Operations	N1C	FALCON 2000	Yes	Yes		First Warning	
B.Buckley	7/14/2020 12:13	ACK - Daily Operations	N742QS	Challenger 350	Yes				pic advised while entering the ramp
B.Buckley	7/14/2020 12:12	ACK - Daily Operations	N272TX	G4	Yes				pic advised upon arrival
B.Buckley	7/14/2020 11:03	ACK - Daily Operations	N736MB	Hawker	Yes			First Warning	pilot stated they are a quick turn
B.Buckley	7/14/2020 10:37	ACK - Daily Operations	N84PH	F-900	Yes			First Warning	PIC advised of APU policy. He stated that they are leaving in 15 minutes with 7 people.
Addison Falconer	7/13/2020 16:45	ACK - Daily Operations	N321AK	Falcon 900	Yes	Yes		First Warning	
Shanroy Nelson	7/13/2020 14:56	ACK - Daily Operations	N177BD	G4	Yes	No	On quick turn wont be on the ground for no more than 15 minutes.	First Warning	
Shanroy Nelson	7/13/2020 14:54	ACK - Daily Operations	N768QS	CL35	Yes	No	Here for only 20 minutes stated by the Pilot.	First Warning	
Shanroy Nelson	7/13/2020 14:53	ACK - Daily Operations	N388AC	G5	Yes	Yes		First Warning	
Shanroy Nelson	7/13/2020 11:05	ACK - Daily Operations	N2618K	CL30	Yes	Yes	Less than 30 minutes on the ground via pilot	First Warning	
Shanroy Nelson	7/12/2020 12:19	ACK - Daily Operations	N1969M	CL60	Yes	No	We are on a quick turn.	First Warning	
Shanroy Nelson	7/12/2020 12:18	ACK - Daily Operations	N721MC	G5	Yes	Yes		First Warning	
Shanroy Nelson	7/12/2020 12:12	ACK - Daily Operations	N650QS	Latitude	Yes	No	Departure at 12	First Warning	
Shanroy Nelson	7/12/2020 11:57	ACK - Daily Operations	N1903G	CL60	Yes	No	Leaving in 10 minutes via pilot	First Warning	
Shanroy Nelson	7/12/2020 11:56	ACK - Daily Operations	N77UW	Latitude	Yes	No	Passengers are on their way to the airport Via pilot	First Warning	
Shanroy Nelson	7/11/2020 12:52	ACK - Daily Operations	N791QS	CL35	Yes	Yes		First Warning	
Shanroy Nelson	7/11/2020 9:41	ACK - Daily Operations	N792XJ	CITATION X	Yes	No	PASSENGERS WILL BE HERE AT 10AM PILOT.	First Warning	
Shanroy Nelson	7/11/2020 9:40	ACK - Daily Operations	N380ER	G6	Yes	No	LEAVING IN 15 TO 20 MINUTES	First Warning	
Shanroy Nelson	7/11/2020 9:39	ACK - Daily Operations	N800QS	CITATION LONGITUDE	Yes	No	PASSENGERS ARE HERE VIA PILOT.	First Warning	
Shanroy Nelson	7/10/2020 13:50	ACK - Daily Operations	N798QS	CL35	Yes	No	Pilot state they are on a quick turn.	First Warning	
Shanroy Nelson	7/10/2020 13:47	ACK - Daily Operations	N243PG	Hawker 4000	Yes	Yes		First Warning	
Shanroy Nelson	7/10/2020 13:45	ACK - Daily Operations	N675CS	Citation X	Yes	No	Pilot said ok.	First Warning	
Shanroy Nelson	7/10/2020 12:05	ACK - Daily Operations	N317ML	FALCON 900	Yes	Yes		First Warning	
Shanroy Nelson	7/10/2020 12:04	ACK - Daily Operations	N211QS	CL60	Yes	No	Won't be on the ground for long on a quick turn VIA Pilot	First Warning	
Shanroy Nelson	7/10/2020 12:03	ACK - Daily Operations	N233XL	XL	Yes	Yes		First Warning	
Shanroy Nelson	7/9/2020 19:40	ACK - Daily Operations	N321AK	Falcon 900	Yes	Yes		First Warning	Pilot stated they are aware of the 15 mins APU restrictions.
Shanroy Nelson	7/9/2020 18:01	ACK - Daily Operations	N603QS	Citation Latitude	Yes	Yes		First Warning	
Shanroy Nelson	7/9/2020 17:54	ACK - Daily Operations	N629DA	Falcon 900	Yes	Yes	On a super quick turn.	First Warning	
Shanroy Nelson	7/9/2020 17:52	ACK - Daily Operations	N90KC	CL60	Yes	No	Pilot stated he is on a quick turn.	First Warning	
Shanroy Nelson	7/9/2020 16:26	ACK - Daily Operations	N41DH	CL30	Yes	Yes		First Warning	Won't be here that long. Stated by the pilot.
Shanroy Nelson	7/9/2020 16:11	ACK - Daily Operations	N430FX	Legacy	Yes	Yes		First Warning	Pilot said he will shut it down as soon as he is parked.
B.Buckley	7/9/2020 7:16	ACK - Daily Operations	N321AK	F900	Yes				crew informed upon arrival at airport.
B.Buckley	7/8/2020 11:25	ACK - Daily Operations	N947JS	Citation X	Yes			First Warning	PIC advised by line service upon arrival
Shanroy Nelson	7/6/2020 12:23	ACK - Daily Operations	N1969M	CL60	Yes	No	As soon we are finish fueling him he will get his passenger and be on his way Pilot statement.	First Warning	
Shanroy Nelson	7/6/2020 12:20	ACK - Daily Operations	N13JS	GV	Yes	No	Pilot stated he is on the ground for only 15 minutes	First Warning	
Preston Harimon	7/6/2020 10:17	ACK - Daily Operations	N54VM	Hawker	Yes	No	Pilot states pax will arrive in 10 mins, if not he will shut it down	First Warning	Shanroy Nelson
Shanroy Nelson	7/5/2020 15:01	ACK - Daily Operations	N551CB	G4	Yes	No		Second Warning	Pilot looked at me like I had 4 heads.
Shanroy Nelson	7/5/2020 14:12	ACK - Daily Operations	N625LR	CL60	Yes	Yes		First Warning	
Shanroy Nelson	7/5/2020 12:58	ACK - Daily Operations	N49HT	Falcon 2000	Yes			First Warning	Quick turn won't be long passenger are on the way pilot statement.
Shanroy Nelson	7/5/2020 11:07	ACK - Daily Operations	N136MV	Falcon 50	Yes			Second Warning	I'll talk to my captain and see what he wants to do.
Shanroy Nelson	7/5/2020 10:40	ACK - Daily Operations	N240CX	G6	Yes			First Warning	I need 45 minutes to get things up and running stated by the pilot.

Shanroy Nelson	7/5/2020 10:24	ACK - Daily Operations	N513QS	GV	Yes	Yes		First Warning	I'm on a quick turn stated by the pilot.
Addison Falconer	7/5/2020 10:23	ACK - Daily Operations	N136MV	Falcon	Yes	Yes		First Warning	
Shanroy Nelson	7/5/2020 8:17	ACK - Daily Operations	N335LL	GV	Yes	Yes			Told pilot about the 15 minutes APU restriction. Pilot states he need only 15 mins to get the system up and running.
Shanroy Nelson	7/4/2020 13:49	ACK - Daily Operations	N551TG	GV	Yes	Yes		First Warning	
B.Buckley	7/4/2020 9:53	ACK - Daily Operations	N27YA	G4	Yes			First Warning	PIC informed of APU restriction while entering the ramp
Shanroy Nelson	7/3/2020 11:42	ACK - Daily Operations	N706QS	CL35	Yes	Yes			Aircraft left shortly after arrival
Shanroy Nelson	7/3/2020 11:41	ACK - Daily Operations	N101QS	GLOBAL EXPRESS	Yes				Pilot states he need 29 minutes to get everything going.
B.Buckley	7/3/2020 11:10	ACK - Daily Operations	N706QS	Challenger 350	Yes			First Warning	PIC advised of APU restriction while entering the ramp
Shanroy Nelson	7/2/2020 17:44	ACK - Daily Operations	N984DV	CL60	Yes	Yes			
Shanroy Nelson	7/2/2020 17:44	ACK - Daily Operations	N933EY	GLOBAL EXPRESS	Yes	Yes			
B.Buckley	7/2/2020 10:35	ACK - Daily Operations	N770CC	Hawker	Yes			First Warning	pic stated they are leaving at 12pm
B.Buckley	6/30/2020 14:48	ACK - Daily Operations	N168NQ	Challenger	Yes			First Warning	aircraft departed shortly after advisory
Addison Falconer	6/28/2020 9:17	ACK - Daily Operations	N527P	Falcon 900	Yes	Yes		First Warning	
F. Wellington	6/27/2020 17:30	ACK - Daily Operations	N80AE	Citation Exel	Yes	Yes		First Warning	
B.Buckley	6/27/2020 9:20	ACK - Daily Operations	N909VJ	Falcon 50	Yes			First Warning	PIC advised of restriction
Addison Falconer	6/26/2020 20:21	ACK - Daily Operations	N170WC	Challenger 300	Yes	Yes		First Warning	
Addison Falconer	6/25/2020 22:47	ACK - Daily Operations	N117MS	Global 5000	Yes	Yes		First Warning	
Nolan Spence	6/23/2020 11:41	ACK - Daily Operations	N587FX	Challenger 350	Yes	No	Just pulled in	First Warning	
F. Wellington	6/20/2020 16:01	ACK - Daily Operations	N804QS	Citation Longitude	Yes	Yes		First Warning	APU was shut down
Nolan Spence	6/19/2020 21:35	ACK - Daily Operations	N240CX	Gulfstream 650	Yes	No	Cleaning the aircraft	First Warning	
Nolan Spence	6/19/2020 18:59	ACK - Daily Operations	N111MD	Hawker	Yes	Yes		First Warning	
Nolan Spence	6/19/2020 17:10	ACK - Daily Operations	N506UP	Citation XL	Yes	Yes		First Warning	
B.Buckley	6/17/2020 7:55	ACK - Daily Operations	N261PA	Hawker 800	Yes	No	PIC stated that pax would be arriving soon ans requested line service to remove wheel chocks. Aircraft departed 10 minutes after 1st warning.	First Warning	
Nolan Spence	6/14/2020 10:45	ACK - Daily Operations	N949SA	Citation 650	Yes	No	Just started his APU	First Warning	
B.Buckley	6/12/2020 14:16	ACK - Daily Operations	N947JS	Citation X	Yes			First Warning	Pilot stated he is aware of the restriction.
B.Buckley	6/10/2020 8:32	ACK - Daily Operations	N435QS	G4	Yes				pic advised of restriction upon arrival
B.Buckley	6/10/2020 7:51	ACK - Daily Operations	N163DK	hawker	Yes	No	departing soon with passengers	First Warning	
F. Wellington	6/8/2020 16:05	ACK - Daily Operations	N804QS	Citation Latitude	Yes	Yes		First Warning	
Shanroy Nelson	6/5/2020 9:22	ACK - Daily Operations	N508DJ	FALCON	Yes	Yes		First Warning	PILOT SAID HE WILL BE DEPARTING IN 15 MINUTES
B.Buckley	6/3/2020 13:57	ACK - Daily Operations	N411FX	Legacy 450	Yes	Yes		First Warning	APU turned off
B.Buckley	6/3/2020 9:30	ACK - Daily Operations	N660QS	Citation XL	Yes	Yes			PIC notified of apu restriction upon arrival.
B.Buckley	5/20/2020 13:11	ACK - Daily Operations	N86MW	Gulfstream 4	Yes	No		First Warning	
Preston Harimon	3/17/2020 15:05	ACK - Daily Operations	N954SG	FA50	Yes	No	Waiting on flight release. will depart ASAP once received. Plus FBO building closed due to COVID19	First Warning	
Addison Falconer	2/8/2020 10:58	ACK - Daily Operations	N569HA	Hawker	Yes	Yes		First Warning	


Noise Complaints: RW Closure, Misc, & Ground Noise
Complaints
45
40
35
30
25
20
15
10
5
0
Jan-13
Jul-13
Jan-14
Jul-14
Jan-15
Jul-15
Jan-16
Jul-16
Jan-17
Jul-17
Jan-18
Jul-18
Jan-19
Jul-19
Jan-20
Jul-20
Jan-21
Month/Year

Date	Tail #	APU on	APU off	Run Time
6/30/2013	Airport2	4:39	5:01	0:22
7/3/2013	CFFBC	4:41	5:50	1:09
6/30/2013	N117MS	5:35	5:52	0:17
7/3/2013	N11VG	3:43	3:57	0:14
7/3/2013	N125QS	3:52	4:02	0:10
6/30/2013	N144GA	5:08	5:12	0:04
7/7/2013	N160WC	7:27	8:42	1:15
6/30/2013	N168NQ	4:33	5:11	0:38
7/7/2013	N1818S	7:04	8:10	1:06
8/11/2013	N1818S	18:21	19:30	1:09
7/2/2013	N1C	3:27	4:06	0:39
6/30/2013	N232CE	6:05	6:17	0:12
8/11/2013	N276GC	17:30	17:46	0:16
8/11/2013	N311MB	18:55	19:51	0:56
6/30/2013	N313QS	4:33	4:47	0:14
7/3/2013	N342QS	3:28	3:40	0:12
7/2/2013	N371FP	3:56	4:17	0:21
7/7/2013	N401QS	6:00	8:17	2:17
7/14/2013	N417CS	11:45	12:18	0:33
6/30/2013	N422FL	5:58	6:06	0:08
7/14/2013	N439FX	11:33	11:55	0:22
6/30/2013	N465QS	4:33	4:45	0:12
7/3/2013	N470CT	3:29	3:36	0:07
7/7/2013	N473HB	6:19	6:51	0:32
7/14/2013	N498QS	11:42	14:16	2:34
8/11/2013	N501CV	18:30	20:00	1:30
7/2/2013	N576CS	3:20	3:35	0:15
8/11/2013	N600QS	17:45	18:30	0:45
8/11/2013	N601AF	17:30	17:48	0:18
6/30/2013	N614QS	5:07	5:46	0:39
7/3/2013	N61VC	3:05	3:15	0:10
7/2/2013	N621FX	3:35	3:40	0:05
6/30/2013	N632XL	6:35	6:45	0:10
6/30/2013	N632XL	5:30	6:15	0:45
7/14/2013	N672QS	11:17	11:40	0:23
7/14/2013	N700FS	11:45	12:06	0:21
8/11/2013	N703SM	17:45	18:03	0:18
6/30/2013	N715CB	6:00	6:47	0:47
7/7/2013	N717HA	7:13	7:17	0:04
7/7/2013	N719QS	6:35	7:10	0:35
7/2/2013	N720QS	3:10	3:43	0:33
7/14/2013	N721QS	11:46	12:45	0:59
7/7/2013	N745QS	6:20	6:40	0:20
7/7/2013	N825QS	6:20	6:38	0:18
7/14/2013	N846QS	11:22	11:30	0:08
7/7/2013	N860TM	7:03	7:15	0:12
7/3/2013	N865PC	4:16	4:38	0:22
7/14/2013	N886O	11:26	12:02	0:36

APU RUN SUMMARY	Run Time
Average Run	0:33
Median Run	0:21
Max Run	2:34
Min run	0:04

Run Time		
0:04		
0:04		
0:05		
0:07		
0:08		
0:08		
0:10		
0:10		
0:10		
0:12		
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0:18		
0:20		
0:21		
0:21		
0:22		
0:22		
0:22		
0:23	<1/2 hr	58%
0:32	1/2 to 1 hr	27%
0:33	1-2 hrs	10%
0:33	>2hrs	4%
0:35		
0:36		
0:38		
0:39		
0:39		
0:45		
0:45		
0:47		
0:56		
0:59		
1:06		
1:09		
1:09		
1:15		
1:30		
2:17		
2:34		

Stormwater Infrastructure Assessment

for

Nantucket Memorial Airport

October 2020
For Airport Review

Establishing a Maintenance Plan

As previously noted, it is fully expected that the airport – specifically the maintenance staff – already knows the areas of the airfield that are potentially problematic, and we expect their experience will be woven into the application of the offered maintenance plan described below. This report recommends the rotation/cycling of the robust maintenance based upon the different areas as presented in the airfield maps discussed previously in this report (Areas A-G).

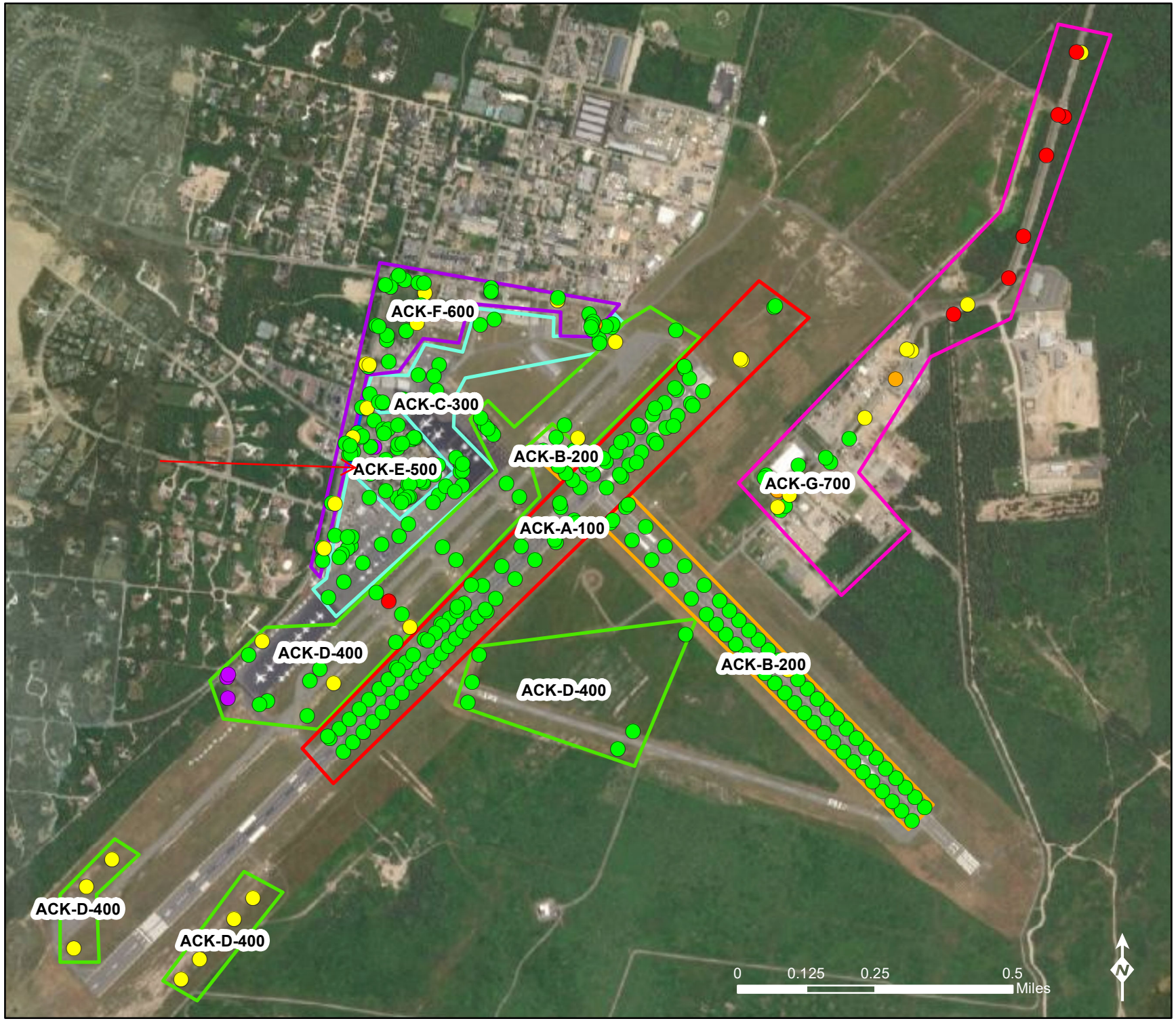
Areas should be judged by the airport based on their current condition, as well as the priority of high-safety areas such as runway pavements.

Area	Number of Structures	Recommended Schedule	Current Rating Based on 2020 Evaluation
Area A (Runway 6-24)	93	Spring of Odd Years	Less Concerning
Area B (Runway 15-33)	63	Spring of Even Years	Less Concerning
Area C (Taxiways and Ramps)	41	Fall of Even Years	Less Concerning
Area D (Taxiways)	43	Fall of Odd Years	Concerning
Area E (Landside Parking)	45	Winter - Annual	Concerning
Area F (Airport Road Area)*	39	Winter*	Concerning
Area G (Bunker/New South)*	25	Winter*	More Concerning

* - Coordination with the Town is recommended for structures outside of Airport Control.

This schedule is created with the following notes, which can be updated or modified by the airport:

1. Generally, the airport is extremely busy in the summer, and maintenance at that time would be expected to include only emergency repairs. As such summer is omitted from this agenda.
2. The runway work should be completed if possible before the high summer season.
3. The taxiway/ramp work is appropriate for fall/early winter work.
4. The work in the parking lots and along roadways should be reviewed more frequently due to the various forms of trash and debris (in addition to leaves/clippings) that can impact the system in those areas. A winter review is merited here to see how the system can accommodate snow melt in the years where it occurs.
5. This schedule should be updated, as previously noted, based on the cumulative age of the infrastructure in each Group/Region. For example, upon completion of Runway 6-24 in the future, routine maintenance may be able to be decreased or the years switched with Runway 15-33.



Legend

Airfield Assets

- Good Condition
- Fair Condition
- Poor Condition
- Failing
- Uninspected

Index Grid

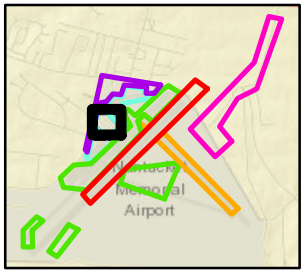
- ACK-A-100
- ACK-B-200
- ACK-C-300
- ACK-D-400
- ACK-E-500
- ACK-F-600
- ACK-G-700

Stormwater Infrastucture Assessment

Nantucket Memorial Airport
October 2020

Nantucket Memorial Airport
NANTUCKET, MA

Jacobs



Legend

Airfield Assets

- Good Condition
- Fair Condition
- Poor Condition
- Failing
- Uninspected

Index Grid

- ACK-E-500

Stormwater Infrastucture Assessment

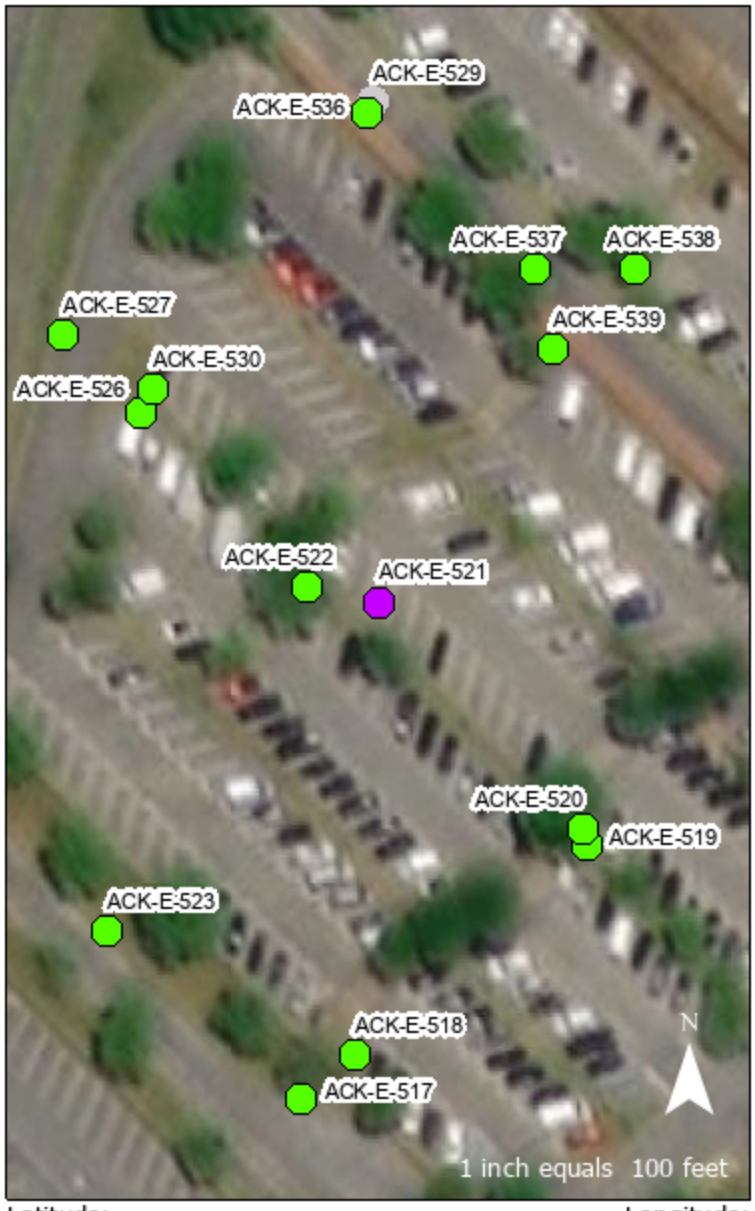
Nantucket Memorial Airport
October 2020

Nantucket Memorial Airport
NANTUCKET, MA

Jacobs

Assessment Information

Airport:	ACK
Assessment Date:	
Structure ID:	ACK-E-521
Structure Type:	Drop Inlet
Type Duration:	Permanent
Structure Material:	Concrete
Other Material:	
Text on Rim/Grate:	
Structural Condition:	**Uninspected**
Depth (Ft):	
Inlet Dimensions (In):	
Water at Inspection:	Dry
Sediment:	
Pollution/Debris:	
Maintenance Needed:	
Maintenance Description:	
Other Comments:	Car obstructing



Latitude: Longitude:

Assessment Information

Airport:	ACK
Assessment Date:	7/30/2020 10:52:00 AM
Structure ID:	ACK-E-502
Structure Type:	Drop Inlet
Type Duration:	Permanent
Structure Material:	Concrete
Other Material:	
Text on Rim/Grate:	
Structural Condition:	**Good Condition**
Depth (Ft):	2.80
Inlet Dimensions (In):	27x27
Water at Inspection:	Dry
Sediment:	Light Sediment
Pollution/Debris:	Heavy Debris
Maintenance Needed:	Yes, Future
Maintenance Description:	Debris
Other Comments:	PVC Pipe leading in from opposing parking stall

Latitude: 41.256969760 Longitude: -70.064218000

Generated On: 10/21/2020

Stormwater Facility Inspection and Maintenance Checklists

Inspection and Maintenance Checklist
Stormwater Collection and Conveyance System

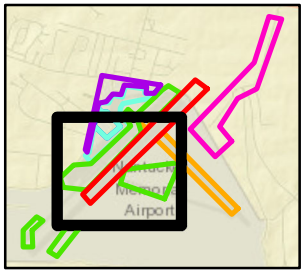
Date of Inspection: 2/17/2021 Inspection Area: Front of main terminal

Field Inspector(s): JG,RH,JB,GA Reason for Inspection: Preventive maint.

Current Weather: cloudy

Structure Type	Location		Sediment Build-up		Maintenance Needed			Maintenance Follow-up	
(Drop Inlet)	GIS#/ GPS	Description	Depth (in)	Needs Removal?	Code	Description/Action Needed	Date Completed	new Depth (feet)	Initials
ACK-E-500		Parking lot	3’	yes	1	Robust cleaning	3-17-21	7’3”	RH
ACK-E-501		terminal	6’8”	no	1	none			
ACK-E-502		Parking lot	**2.5’**	yes	1	Robust cleaning	3-17-21	**6’1”**	RH
ACK-E-503		Taxi lane	4’7”	yes	1	Robust cleaning	3-11-21	5’5”	RH
ACK-E-504		Taxi drop off	5’	yes	1	Robust cleaning	3-11-21	6’1”	RH
ACK-E-505		terminal	6’2”	no		none			
ACK-E-506		Parking lot	4’	yes	1	Robust cleaning	3-17-21	6’4”	RH
ACK-E-507		Exit lane	5’1”	no		none			
ACK-E-508		Terminal	4’	yes	1	Robust cleaning	3-17-21	5’5”	RH
ACK-E-509		N/A		no					
ACK-E-510		N/A		no					
ACK-E-511		N/A		no		Water Meter			
ACK-E-512		N/A		no		Sewer cover			
ACK-E-513		Taxi Lane	5’9”	no		none			
ACK-E-514		terminal	5’5”	no		none			
ACK-E-515		N/A		no		Sewer cover			
ACK-E-516		Blade/ fbo	3’3”	yes	1	Robust cleaning	3-11-21	4’1”	RH
ACK-E-517		Entrance Rd	4’7”	yes	1	Robust cleaning	3-11-21	6’	RH
ACK-E-518		Parking Lot	6’	no		none			
ACK-E-519		Parking Lot	3’	yes	1	Car blocking			
ACK-E-520		Parking Lot	5’1”	no		none			
ACK-E-521		Parking Lot	4’	yes	1	none			
ACK-E-522		Parking Lot	5’	yes	1	none			

Structure Type	Location		Sediment Build-up		Maintenance Needed			Maintenance Follow-up	
(Drop Inlet)	GIS#/ GPS	Description	Depth (in)	Needs Removal?	Code	Description/Action Needed	Date Completed	new Depth (feet)	Initials
ACK-E-523		Entrance Rd	5’9”	no		none			
ACK-E-524		Parking Lot	6’	no		none			
ACK-E-525		N/A		no		Electrical cover			
ACK-E-526		Parking Lot	5’	no		none			
ACK-E-527		Parking Lot	6’3”	no		none			
ACK-E-528		Exit Road	5’3”	no		none			
ACK-E-529		Exit Road	5’5”	no		none			
ACK-E-530		Parking lot	6’	no		Replace grate			
ACK-E-531		North ramp	5’7”	no		none			
ACK-E-532		Parking Lot	2’	yes	1	Robust cleaning	3-23-21	5’8”	RH,JB
ACK-E-533		Parking Lot	5’5”	no		none			
ACK-E-534		Rental lane	5’9”	yes	1,3	Clear vegatation	3-12-21	6’1”	RH
ACK-E-535		North Ramp	6’8”	no		none			
ACK-E-536		Exit Road	5’3”	no	1	Future Cleaning			
ACK-E-537		Exit Road	4’1”	yes	1	Robust Cleaning	3-12-21	6’1”	RH
ACK-E-538		Rental lane	5’8”	no		None			
ACK-E-539		Parking Lot	6’	no		None			
ACK-E-540		N/A				Well cover			
ACK-E-541		North Ramp	7’	no		None			
ACK-E-542		Entrance Rd	4’1”	yes	1	Robust Cleaning	3-11-21	5’9”	RH
ACK-E-543		Exit Road	4’3”	yes	1	Robust Cleaning	3-12-21	6’1”	RH
ACK-E-544		Parking Lot	6’3”	no		None			



Legend

Airfield Assets

- Good Condition
- Fair Condition
- Poor Condition
- Failing
- Uninspected

Index Grid

- ACK-D-400

Stormwater Infrastucture Assessment

Nantucket Memorial Airport
October 2020

Nantucket Memorial Airport
NANTUCKET, MA

Jacobs

Assessment Information

Airport:	ACK
Assessment Date:	7/31/2020 4:46:16 PM
Structure ID:	ACK-D-433
Structure Type:	Drop Inlet
Type Duration:	Permanent
Structure Material:	Concrete
Other Material:	
Text on Rim/Grate:	
Structural Condition:	**Uninspected**
Depth (Ft):	
Inlet Dimensions (In):	
Water at Inspection:	
Sediment:	
Pollution/Debris:	
Maintenance Needed:	
Maintenance Description:	
Other Comments:	

Latitude: Longitude:

Generated On: 10/21/2020

Assessment Information

Airport:	ACK
Assessment Date:	
Structure ID:	ACK-D-407
Structure Type:	Culvert
Type Duration:	Permanent
Structure Material:	Concrete
Other Material:	
Text on Rim/Grate:	
Structural Condition:	**Uninspected**
Depth (Ft):	
Inlet Dimensions (In):	
Water at Inspection:	Dry
Sediment:	
Pollution/Debris:	
Maintenance Needed:	
Maintenance Description:	
Other Comments:	

Latitude: Longitude:

Assessment Information

Airport:	ACK
Assessment Date:	7/31/2020 4:46:16 PM
Structure ID:	ACK-D-441
Structure Type:	Culvert
Type Duration:	Permanent
Structure Material:	Concrete
Other Material:	
Text on Rim/Grate:	
Structural Condition:	**Uninspected**
Depth (Ft):	
Inlet Dimensions (In):	
Water at Inspection:	
Sediment:	
Pollution/Debris:	
Maintenance Needed:	Yes, Future
Maintenance Description:	Clear vegetation
Other Comments:	

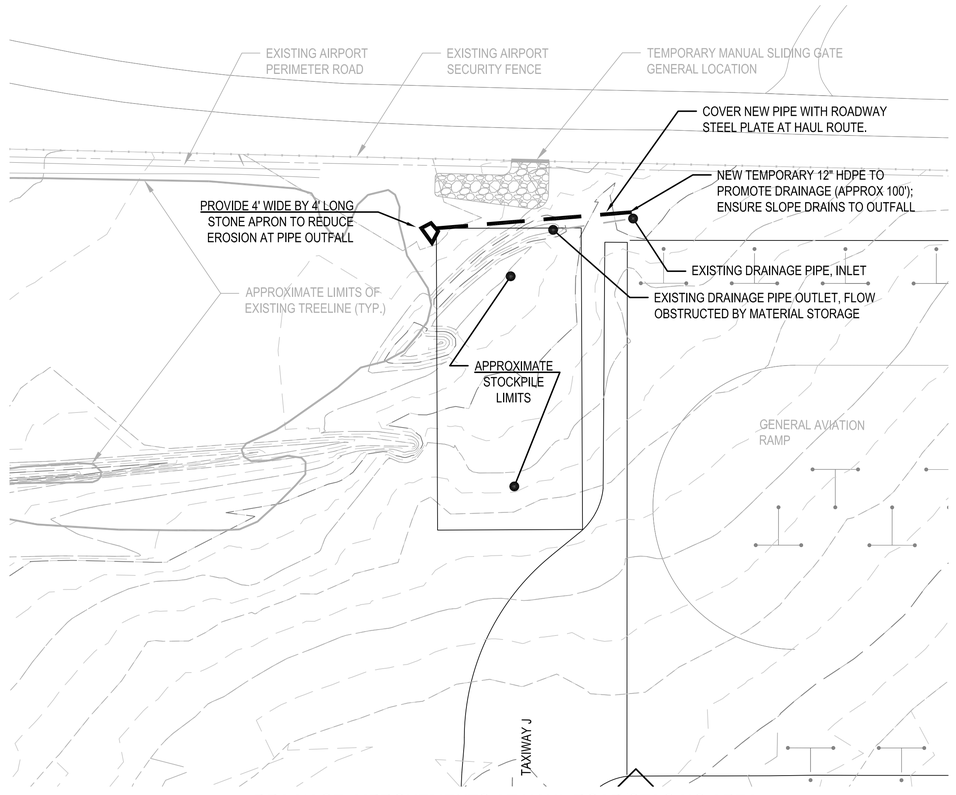
Latitude: 41.252733940 Longitude: -70.068955820

Generated On: 10/21/2020

BEFORE CONDITION, NORTH OF HAUL ROAD (NOT IMPACTED)

BEFORE CONDITION, SOUTH OF HAUL ROAD (IMPACTED)

AFTER CONDITION, NORTH OF HAUL ROAD



DRAINAGE IMPROVEMENTS AT HAUL ROAD/STAGING AREA
SCALE: 1" = 40'

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

GENERAL SKETCH NOTES

1. EXISTING CONDITION SAW A DRAINAGE PIPE EXTEND AS SHOWN ON THE PLAN VIEW PROVIDED.
2. FLOW THROUGH PIPE HAS BEEN INTERRUPTED BY THE STORAGE OF MATERIAL IN THE STAGING AREA.
   2.1. THIS HAS RESULTED IN FLOODING OF ADJACENT MONOHANSETT ROAD.
3. CONTRACTOR IS REQUESTED TO INSTALL TEMPORARY PIPE TO MAINTAIN DRAINAGE FLOW AS IT EXISTED PRIOR TO CONSTRUCTION. DUE TO TRUCK TRAFFIC AND THE ELEVATION OF THE PIPE, A STEEL PLATE ABOVE HDPE PIPE IS SPECIFIED AT THIS TIME.
4. AT THE CONCLUSION OF THE PROJECT AND/OR THE END OF THE USE OF THIS AREA FOR CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL REPLACE THE EXISTING DAMAGED PIPE INSTALLATION WITH LENGTHS OF HDPE PIPE (FROM SITE IF SALVAGABLE, NEW CONTRACTOR PROVIDED IF NOT) AT THE APPROXIMATE SAME ELEVATIONS AS THE EXISTING CONDITION.
5. SEE THE PROJECT SAFETY AND PHASING PLANS FOR ADDITIONAL INFORMATION.

Jacobs

Mark	Description	Date	Appr.

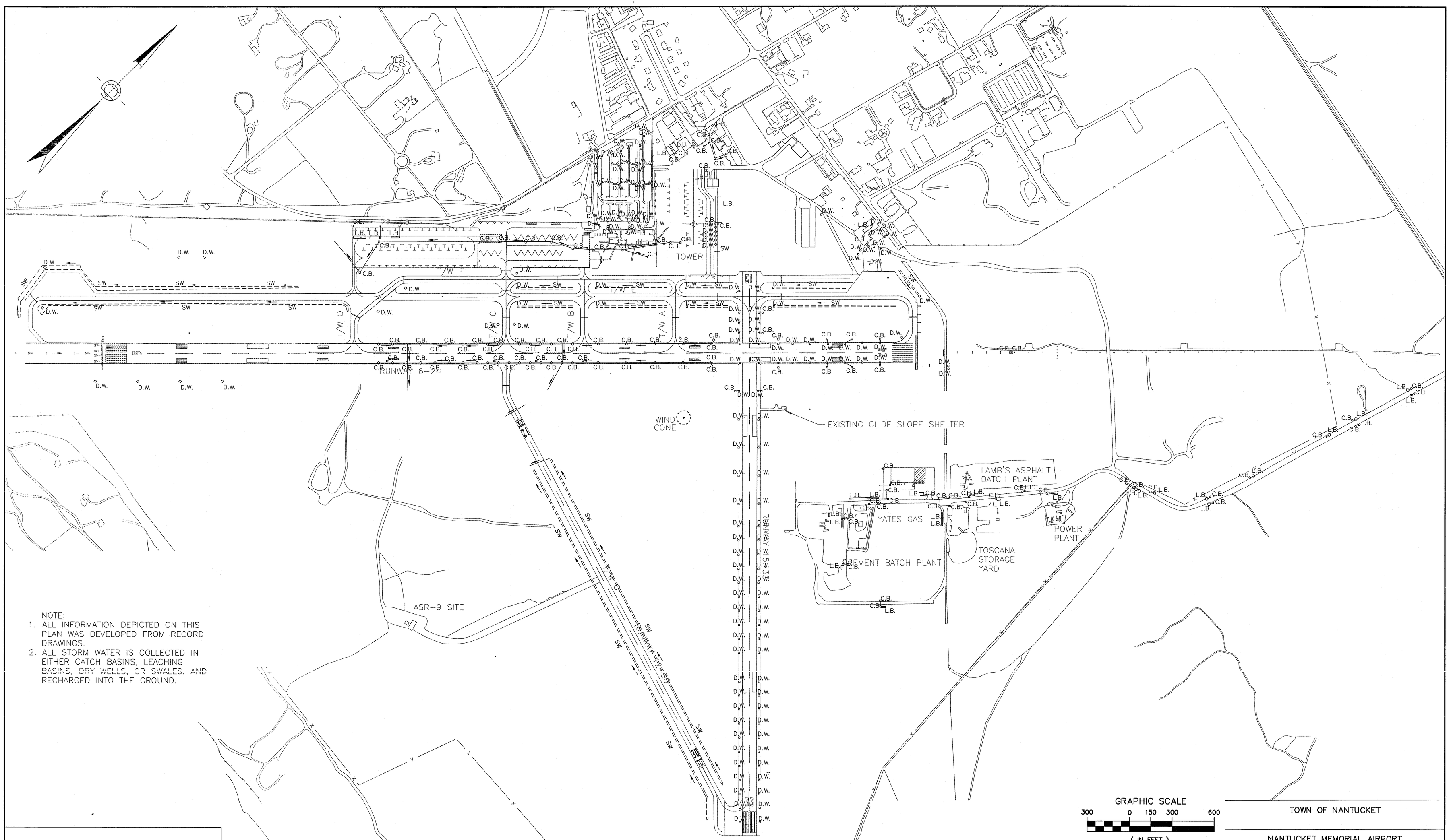
Designed by: DJA
Dwn by: DJA
Ckd by: NBD
Reviewed by:
Submitted by:
Date: 03/12/21
Design file no.
Drawing code:
File name:
Plot date:
Plot scale:
Rev.

Location: NANTUCKET MEMORIAL AIRPORT
NANTUCKET
MASSACHUSETTS

Project: RECONSTRUCT, MARK, LIGHT AND SIGN TAXIWAY 'E'

Sketch Title: DRAINAGE IMPROVEMENTS AT SECURITY GATE

Sketch Reference: SK-07



NOTE:
1. ALL INFORMATION DEPICTED ON THIS PLAN WAS DEVELOPED FROM RECORD DRAWINGS.
2. ALL STORM WATER IS COLLECTED IN EITHER CATCH BASINS, LEACHING BASINS, DRY WELLS, OR SWALES, AND RECHARGED INTO THE GROUND.

LEGEND

CATCH BASIN	C.B.
DRY WELL	D.W.
LEACHING BASIN	L.B.
SWALE	SW

GRAPHIC SCALE
300 0 150 300 600
(IN FEET)
1 inch = 300 ft.

NO.	REVISIONS	BY	APP.	DATE

SUBMITTED BY:
EDWARDS AND KELCEY

TOWN OF NANTUCKET

NANTUCKET MEMORIAL AIRPORT
NANTUCKET, MASSACHUSETTS

DRAINAGE PLAN

Edwards AND Kelcey

DESIGNED ____ DATE ____ SCALE: AS SHOWN
DRAWN TCB DATE 03/04 DRAWING NO. ____
CHECKED CWB DATE 03/04 SHEET NO. 1 OF 1

J:\2002 Projects\020013.015\Drainage\Base.dwg 10/21/2005 9:37:54 AM EDT

Summary of Qualifying Projects:
Section 190 of the FAA Reauthorization Act of 2018 (Pub. L. 115-254) creates a pilot program for environmental mitigation projects. The environmental mitigation projects should introduce new environmental mitigation techniques or technologies that have been proven in laboratory demonstrations. These projects should propose methods for efficient adaptation or integration of new concepts into airport operations.

In addition, these projects must measurably reduce or mitigate aviation impacts on noise, air quality, or water quality at the airport or within five miles of the airport, and demonstrate whether new techniques or new technologies are practical to implement at or near public-use airports.

Funding:
FAA will fund up to six projects. Each project is limited to not more than $2,500,000 in federal funding. The federal share of the cost of the project carried out under the program is 50 percent, and requires 50 percent in airport matching funds.

Pre-Application Requirements:
1. Airport Sponsors should submit a pre-application to their local FAA Airports District Office that includes a project title and location, and identifies the entities that will carry out the project.
2. The pre-application should include a description of the roles and responsibilities of each entity and must be signed by each entity.
3. The pre-application should include a project description that discusses the project and anticipated benefits, the roles and responsibilities of each entity involved in the program, and how the project meets the program's goals of funding mitigation that is not widely available at airports; and could introduce a novel, applicable mitigation opportunity for airport development operations.
4. The pre-application should also describe how environmental benefits will be measured and include a draft scope of work that describes how the entity will implement the environmental mitigation project.
5. The pre-application should include a schedule for completion of the project within 24 months of grant award and feature quarterly reporting to the airport sponsor's Regional or Airport District Office.
6. Lastly, the pre-application should include a preliminary SF-424, with estimated project cost broken out by federal and local share.

Scoring:
FAA will give priority consideration to projects that will achieve the greatest reductions in aircraft noise, airport emissions, or airport water quality impacts either on an absolute basis or on a per dollar of funds expended basis, and will be implemented by an eligible consortium.