April 13, 2026

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LIVIC Civil

Subject: ***PAX-1 – Noise Study***
Middlesex Township, Pennsylvania

Executive Summary

The purpose of this technical memorandum is to summarize the evaluated noise levels associated with the operational equipment expected to be located at the proposed PAX-1 project site in Middlesex Township, Pennsylvania. The proposed facility is generally located north of Country Club Road and Interstate Highway 81, south and east of Conodoguinet Creek, and west of Bernheisel Bridge Road. The proposed PAX-1 site will be located on residential farmland that is surrounded by unified development areas, general industrial, and other residential farmland with some suburban residential properties nearby. The suburban residential properties are located northeast of the site across Conodoguinet Creek. The closest existing residential structure is a part of this development, approximately 500 feet east of the proposed site boundary. The location of the proposed site is shown in **Figure 1**.

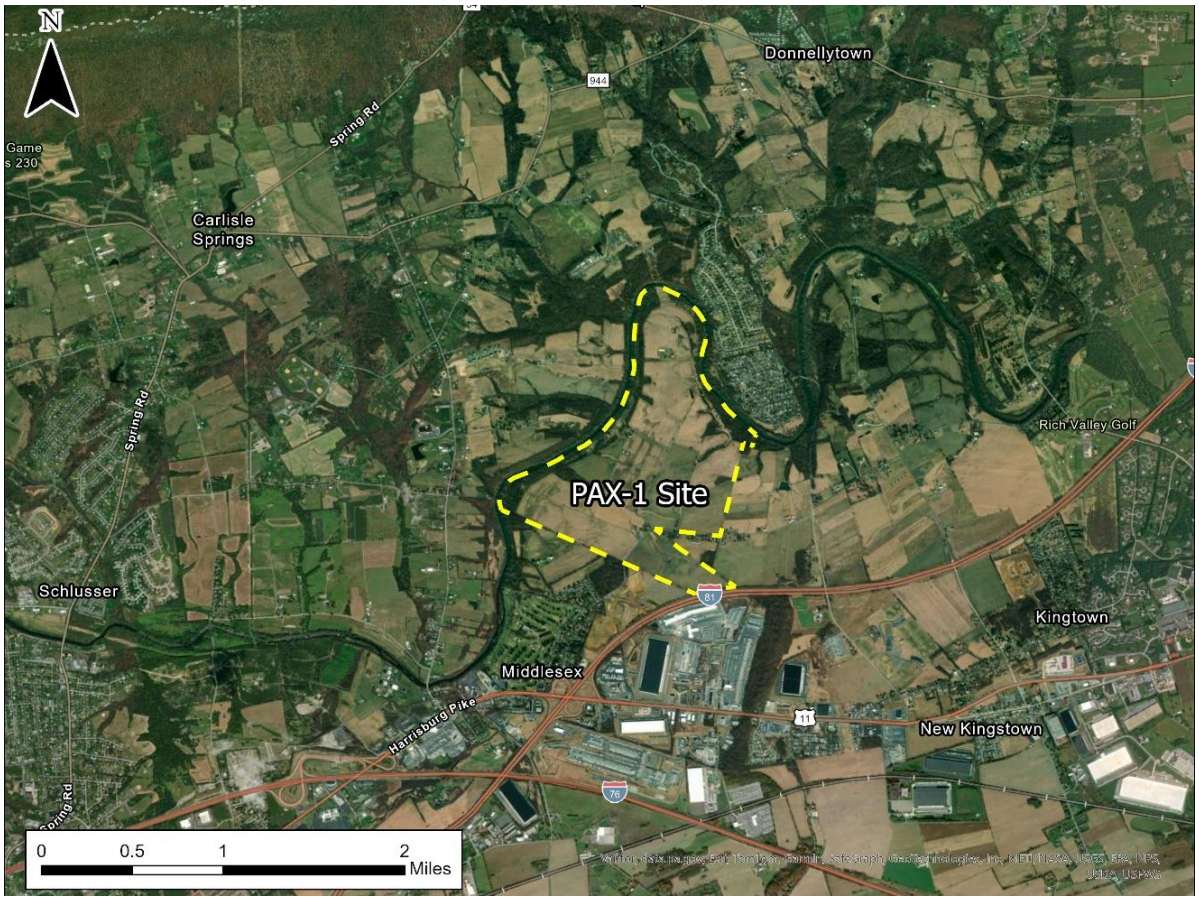
Analysis Findings

- *The proposed PAX-1 site will be located on residential farmland with a data center overlay that is surrounded by residential farmland with suburban residential and industrial land uses beyond. The applicable noise limit for data centers is 70 dB(A) measured at the proposed property boundary based on the current Middlesex Township Zoning Ordinance (September 3, 2025).*
    - *Operational noise levels are anticipated to be approximately 50 dB(A) at the closest property boundary to the data center buildings on the site during normal operations with fans running at maximum load, which is compliant with Middlesex Township regulations. Generator maintenance with all fans running at maximum load and one worst case emergency generator per building running as well has a maximum sound level of approximately 51 dB(A) at the property line.*

Project Description

The proposed PAX-1 site will consist of sixteen data center buildings located in Middlesex Township, Pennsylvania. The data center campus layout is based on the site plans prepared by LIVIC Civil, dated 03/27/2026. It was assumed that the primary noise on the site will consist of fans located on the roofs of the data center buildings, louvers located on the sides of the proposed buildings, and emergency generators located in generator yards adjacent to the proposed data center buildings.

Figure 1: Site Location and Vicinity



Characteristics of Noise

Noise is generally defined as unwanted sound. It is emitted from many natural and man-made sources. Sound pressure levels are usually measured and expressed in decibels (dB). The decibel scale is logarithmic and expresses the ratio of the sound pressure unit being measured to a standard reference level. Most sounds occurring in the environment do not consist of a single frequency, but rather a broad band of differing frequencies. The intensities of each frequency add together to generate sound. Because the human ear does not respond to all frequencies equally, the method commonly used to quantify environmental noise consists of evaluating all of the frequencies of a sound according to a weighting system. It has been found that the A-weighted decibel [dB(A)] filter on a sound level meter, which includes circuits to differentially measure selected audible frequencies, best approximates the frequency response of the human ear.

The degree of disturbance from exposure to unwanted sound – noise – depends upon three factors:

1. The amount, nature, and duration of the intruding noise
2. The relationship between the intruding noise and the existing sound environment; and
3. The situation in which the disturbing noise is heard

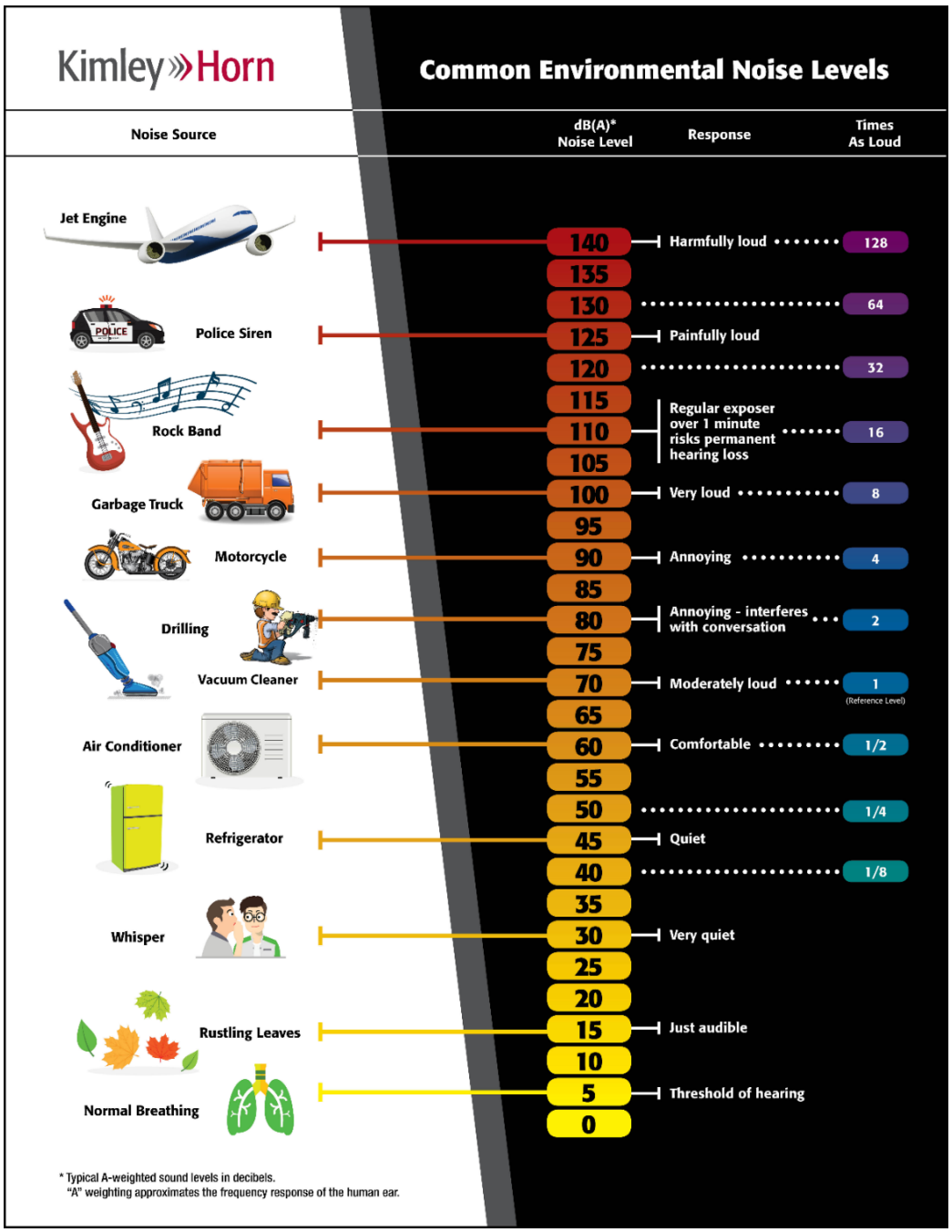
In considering the first of these factors, it is important to note that individuals have varying sensitivity to noise. Loud noises bother some people more than other people, and some individuals become increasingly upset if an unwanted noise persists. The time patterns and durations of noise(s) also affect perception as to whether or not it is offensive. For example, noises that occur during nighttime (sleeping) hours are typically considered to be more offensive than the same noises in the daytime.

With regard to the second factor, individuals tend to judge the annoyance of an unwanted noise in terms of its relationship to noise from other sources (background noise). A car horn blowing at night when background noise levels are low would generally be more objectionable than one blowing in the afternoon when background noise levels are typically higher. The response to noise stimulus is analogous to the response to turning on an interior light. During the daytime an illuminated bulb simply adds to the ambient light, but when eyes are conditioned to the dark of night, a suddenly illuminated bulb can be temporarily blinding.

The third factor – situational noise – is related to the interference of noise with activities of individuals. In a 60 dB(A) environment such as is commonly found in a large business office, normal conversation would be possible, while sleep might be difficult. Loud noises may easily interrupt activities that require a quiet setting for greater mental concentration or rest; however, the same loud noises may not interrupt activities requiring less mental focus or tranquility.

As shown in **Figure 2**, most individuals are exposed to fairly high noise levels from many sources on a regular basis. To perceive sounds of greatly varying pressure levels, human hearing has a non-linear sensitivity to sound pressure exposure. Doubling the sound pressure results in a three decibel change in the noise level; however, variations of three decibels [3 dB(A)] or less are commonly considered “barely perceptible” to normal human hearing. A five decibel [5 dB(A)] change is more readily noticeable. A ten-fold increase in the sound pressure level correlates to a 10 decibel [10 dB(A)] noise level increase; however, it is judged by most people as only sounding “twice as loud”.

Figure 2: Common Noise Levels



Over time, individuals tend to accept the noises that intrude into their lives on a regular basis. However, exposure to prolonged and/or extremely loud noise(s) can prevent use of exterior and interior spaces and has been theorized to pose health risks.

Noise Regulations

The project site and adjacent parcels are in Middlesex Township, Pennsylvania and are subject to the noise regulations identified in the Middlesex Township Zoning Ordinance (MTZO). The current Zoning Ordinance is updated through September 3, 2025.

The following information comes from MTZO Section 3.04 (G) Data Centers 2. g. Noise.

The code requires that a noise study shall be performed for data center sites and performed by an independent noise study expert. The code sets a limit of "70 dB(A), as measured at the property line." The code clarifies that the limit does not apply during the time of a power outage. During this time, the noise ordinance will fall back to the nuisance ordinance specified in Section 4.19(F) Noise.

Article 4, Supplemental Regulations, contains noise regulations in Section 4.19 (F) Noise. Prior to considering the noise requirements in this section, the purpose of Article 4 outlines that "use requirements contained elsewhere in this Ordinance apply to all Uses and Structures, whether or not specifically listed in this Article." Therefore Section 3.04 (G) 2. g. will take precedence over the noise regulations in Article 4, but this report includes them for informational purposes. Article 4 Section 4.19 regulations set limits for "all uses and activities" as seen in **Table 1** below. The code states "At no point at or beyond the property line shall the measured sound level exceed the maximum permitted sound levels designated in the Table [1]." The code defines the measurement for these sounds levels with the following: "Sound levels shall be measured with a sound-level meter and associated octave band filter manufactured in accordance with the American National Standards Institute (ANSI). Noises capable of being measured shall be those noises which cause rapid fluctuations of the sound-level meter with a variation of no more than plus or minus two decibels. Noises incapable of being measured, such as those of irregular and/or intermittent nature, shall be controlled so as not to become a nuisance to adjacent uses."

Table 1: Summary of Table 4.19.2 from MTZO

Octave Band Cycles Per Second		Nonresidential Districts
0 to 75		73
75 to 150		68
150 to 300		64
300 to 600		60
600 to 1,200		55
1,200 to 2,400		51
2,400 to 4,800		47
Over 4,800		43

This Section 4.19 (F) 3. Lists exemptions to the table above, which includes "emission of sound in the performance of emergency work."

Since data centers have specified noise limits prior to the supplemental regulations, the limit of 70 dB(A) is to take precedence at this site for normal operations and testing operations, but during

the time of a power outage, this regulation will apply. Due to the site being used for nonresidential use and the measurement being taken at the site boundary, the nonresidential district octave band limits will apply to this site.

Based on the MTZO, a maximum permissible sound level limit of 70 dB(A) was assumed at the property line of the proposed site in all directions. While the MTZO has a maximum permissible sound level limit of 70 dB(A), it is often recommended to aim for lower operational noise levels, where possible.

Existing Conditions

Long-term noise measurements were obtained by McCormick Taylor at multiple sites near the facility on February 16-19, 2026, and the report was provided to Kimley-Horn to be referenced in this report. A summary of the ambient sound data is included below, with the full report attached for reference.

From Table 6-1 of the McCormick Taylor report, the average ambient equivalent sound level (L_{eq}) values around the site ranged from 44-57 dB(A). The 90th percentile equivalent sound levels (L_{90}) ranged from 41-53 dB(A). The locations of these measurements are in Figure 6-1 of the McCormick Taylor report.

Noise Analysis

Operational sound levels from the proposed PAX-1 project site were evaluated using CadnaA noise modeling software. This program computes predicted sound levels at noise-sensitive areas through a series of adjustments to reference sound levels. CadnaA also accounts for topography and intervening structures. Proposed grading plans and proposed building layouts with all equipment were incorporated into the noise model. Sound levels generated from operations are anticipated to be the main sources of sound from the proposed data centers. Receiver points and noise level contours were developed using a height of 5 feet above the ground, representative of the average height of the human ear. Noise calculations were done using the ISO9613-2:2024 standard.

It should be noted that noise from surrounding roadways was not modeled in this analysis, although Interstate Highway 81, Country Club Road, Bernheisel Bridge Road, and other nearby roadways are anticipated to contribute to the ambient noise environment throughout the entire day. Other sources of noise, which were not modeled in this analysis, included ambient environmental noise, which includes wind, birds chirping, insects, etc. The noise models for this site did not include foliage in the analysis, which in some scenarios can have a mitigating effect on noise.

Normal Operations

Mechanical equipment can generate steady, unvarying sound that may create issues when located near noise-sensitive areas. According to the current site layout, fans and louvers will be distributed on the sides of the proposed data center buildings. It should also be noted that fans were assumed to be operating at 100% load.

Sound produced by the fans is expected to be partially mitigated by the parapet of the data center buildings, which are anticipated to partially shield and disperse some of the sound emitted by the fans. It should also be noted that based on the provided profiles exhibit, an approximately 9-foot-tall

parapet wall along the edge of the roof of all proposed data center buildings is proposed, which is designed to screen and attenuate sound.

Additional mitigation measures were added to the fan and louver operations to reach lower noise levels, although initial results indicated that the MTZO limits would be reached without additional mitigation. This additional mitigation was added for total noise levels in the emergency generator scenario, and therefore the results reflect the equipment that will be needed to reach compliance in all scenarios. All equipment modeling levels are seen below in **Table 2.**

Generator Maintenance and Emergency Generators

Generators can also generate steady, unvarying sound that may create issues when located near noise-sensitive areas. According to the current site layout, it was assumed that emergency generator yards were placed adjacent to the data center buildings. During generator maintenance testing, one generator and one house generator for each building was assumed to be running, and the worst-case scenario generator, the generator closest to sensitive receivers, was analyzed. The emergency generators scenario has all generators on the site running at 100% load. In order to reach certain octave band limits set in Table 4.19.2 of the MTZO, sound walls were modeling surrounding the generator yards at specific locations throughout the campus. These walls were modeled as a smooth façade barrier with a reflection loss of 1 dB. All equipment modeling levels are seen below in **Table 2**.

Table 2: Modeled Equipment Noise Levels

Sound Source	Location	Total Quantity	Sound Level Specifications and Acoustical Model Input Data
Outside Air Inlet Louvers for Direct Air-Handling Units	Each side of two data center buildings	104	Gen yard side of Bldg: L_{wA} = 73 dBA Non-gen yard side of Bldg: L_{wA} = 71 dBA
Rooftop Exhaust Fans	Rooftop	296	Exhaust Fans *L_{wA}: 86 dBA*
Rooftop Unit RTU-1	Rooftop	16	Rooftop Unit RTU-1 *L_{wA}: 100 dBA*
Emergency Power Generators and Catcher Generators (2.5 MW)	Generator yard for data center	566	Casing L_{pA}: 65 dBA at 23 feet
Emergency Power House Generators (600 kW)	Generator yard for auxiliary building(s)	16	Casing L_{pA}: 75 dBA at 23 feet
Outside Air Inlet Louvers for Direct Air-Handling Units	Each side of 14 data center buildings	1096	Gen yard side of Bldg: L_{wA} = 77 dBA Non-gen yard side of Bldg: L_{wA} = 59 dBA
Condenser Units (CU)	Rooftop	396	CU L_{wa}: 87 dBA
Glacier Room Air Cooled Condenser (ACC)	Rooftop	8	ACC L_{wa}: 94 dBA
Glacier Room Make Up Air Unit (MUAU)	Rooftop	2	MUAU L_{wa}: 89 dBA
Transformers	Substation	8	Transformer: 87 dBA

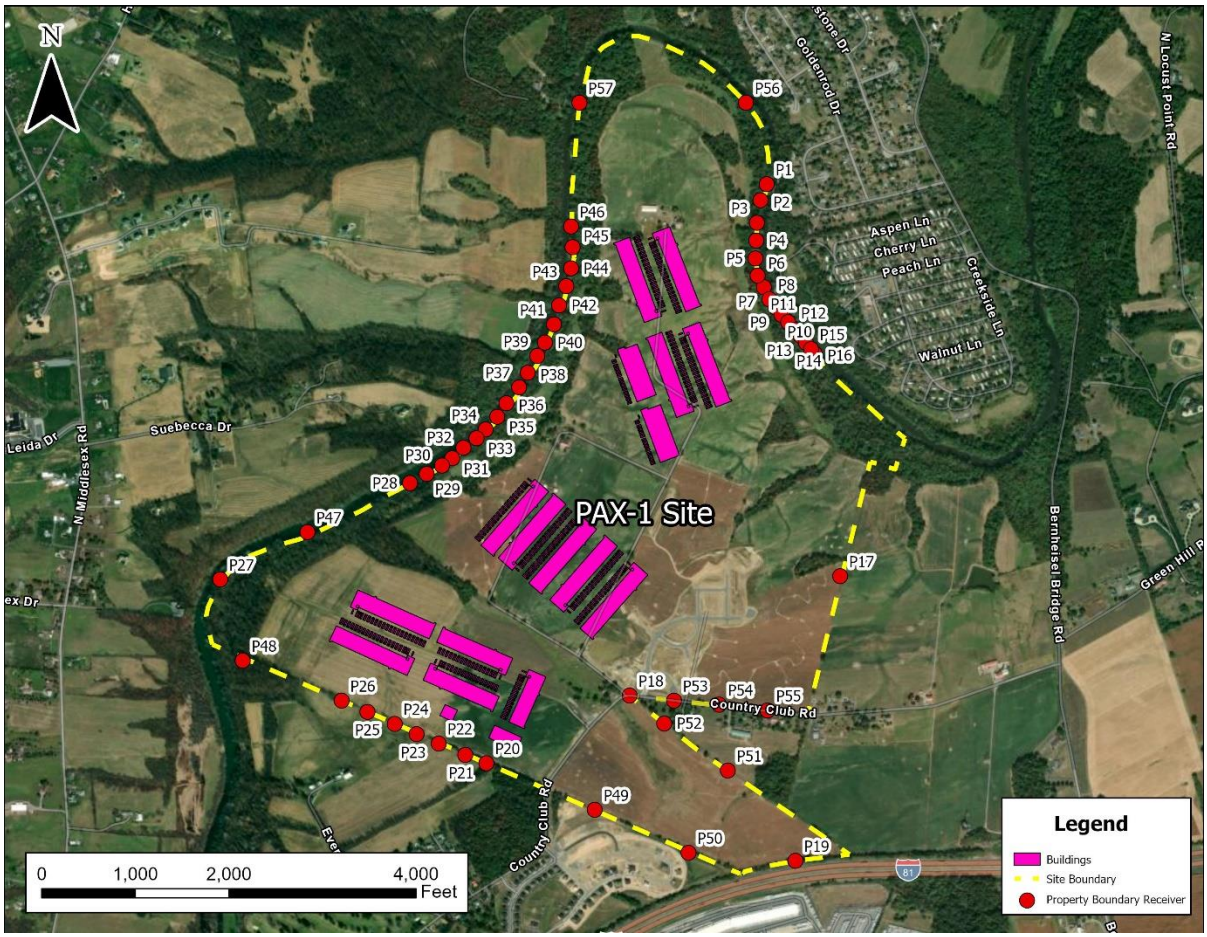
Results

Normal Operations

The CadnaA-predicted maximum equivalent operational noise levels for typical operations at the buildings, with the additional mitigation needed for the emergency generator scenario, would be approximately 50 dB(A) at the closest site boundary to data center buildings. This is below the limit of 70 dB(A) set by Middlesex Township for data centers. Results were calculated at points spread along on the property line around the site in all directions, with additional points every 250 feet or less along the property boundary in areas of the property boundary that were closest to residential receivers. The locations of these receivers can be seen in **Figure 3** and the associated sound levels at each receiver are presented in **Table 2**. The anticipated worst case operational noise contours for typical operations at the data center site are shown in **Figure 4**. The noise levels were calculated explicitly at each receiver for the results in **Table 2.** This can slightly vary from the contour lines, which involve back-end interpolation through a grid-based analysis.

The CadnaA-predicted maximum equivalent operational noise levels from normal operations are anticipated to remain below the site noise regulations of 70 dB(A).

Figure 3: Receiver Locations at Points along the Property Boundary[1]

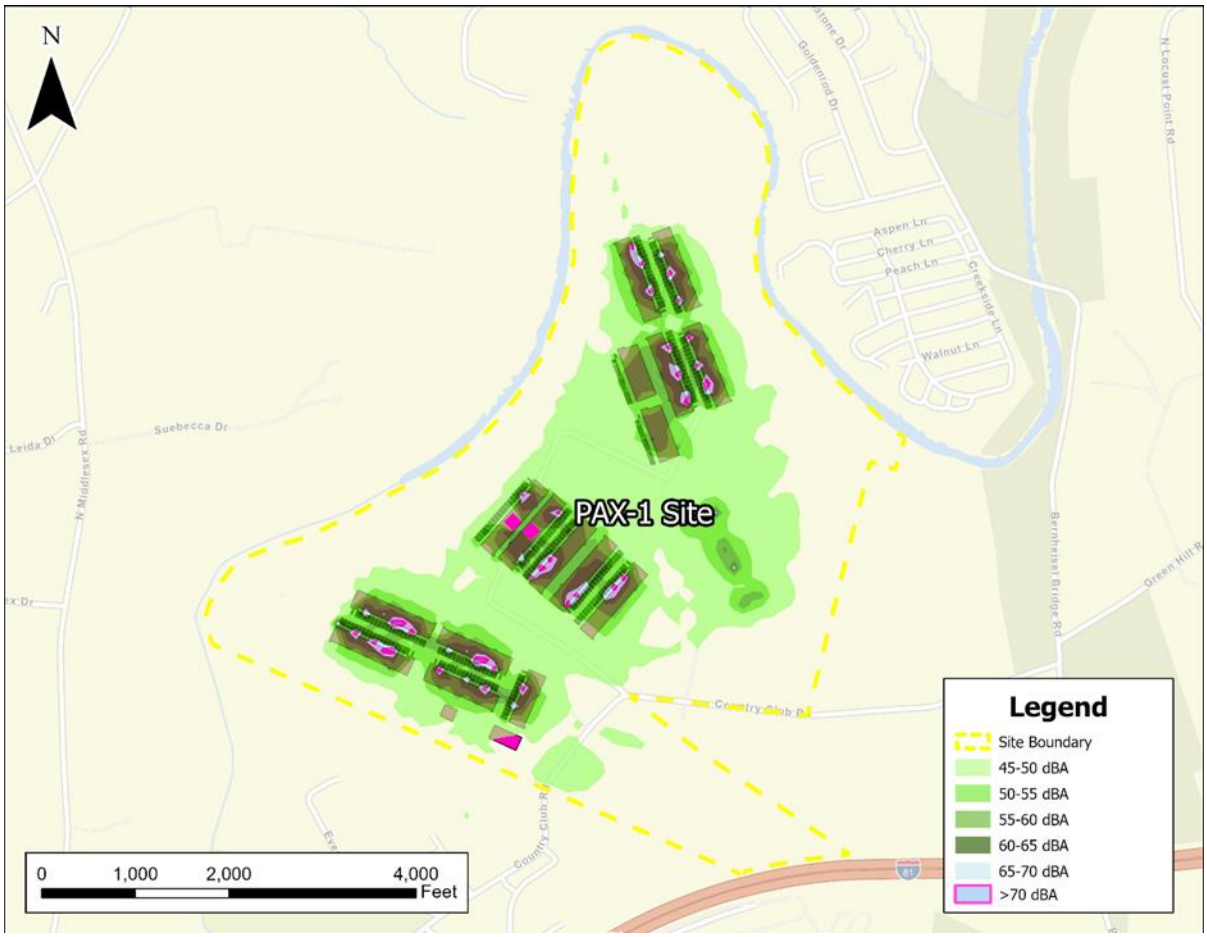


[1]The noise levels were calculated explicitly at each receiver. This can slightly vary from the contour lines, which involve back-end interpolation through a grid-based analysis.

Table 2: Sounds Levels at Points along the Property Boundary during Normal Operations

Receiver Point along Property Boundary	Sound Level (dB[A])
P1	45
P2	45
P3	46
P4	46
P5	46
P6	47
P7	46
P8	47
P9	46
P10	46
P11	46
P12	46
P13	47
P14	47
P15	47
P16	47
P17	48
P18	50
P19	42
P20	50
P21	50
P22	49
P23	50
P24	50
P25	49
P26	49
P27	45
P28	47
P29	48
P30	48
P31	48
P32	47
P33	48
P34	48
P35	48
P36	48
P37	48
P38	48
P39	49
P40	48
P41	48
P42	48
P43	48
P44	49
P45	48
P46	48
P47	46
P48	45
P49	48
P50	45
P51	48
P52	49
P53	49
P54	48
P55	47
P56	44
P57	45

Figure 4: Sound Level Contours during Normal Operations[1]



[1]The noise levels were calculated explicitly at each receiver. This can slightly vary from the contour lines, which involve back-end interpolation through a grid-based analysis.

Generator Maintenance Operations

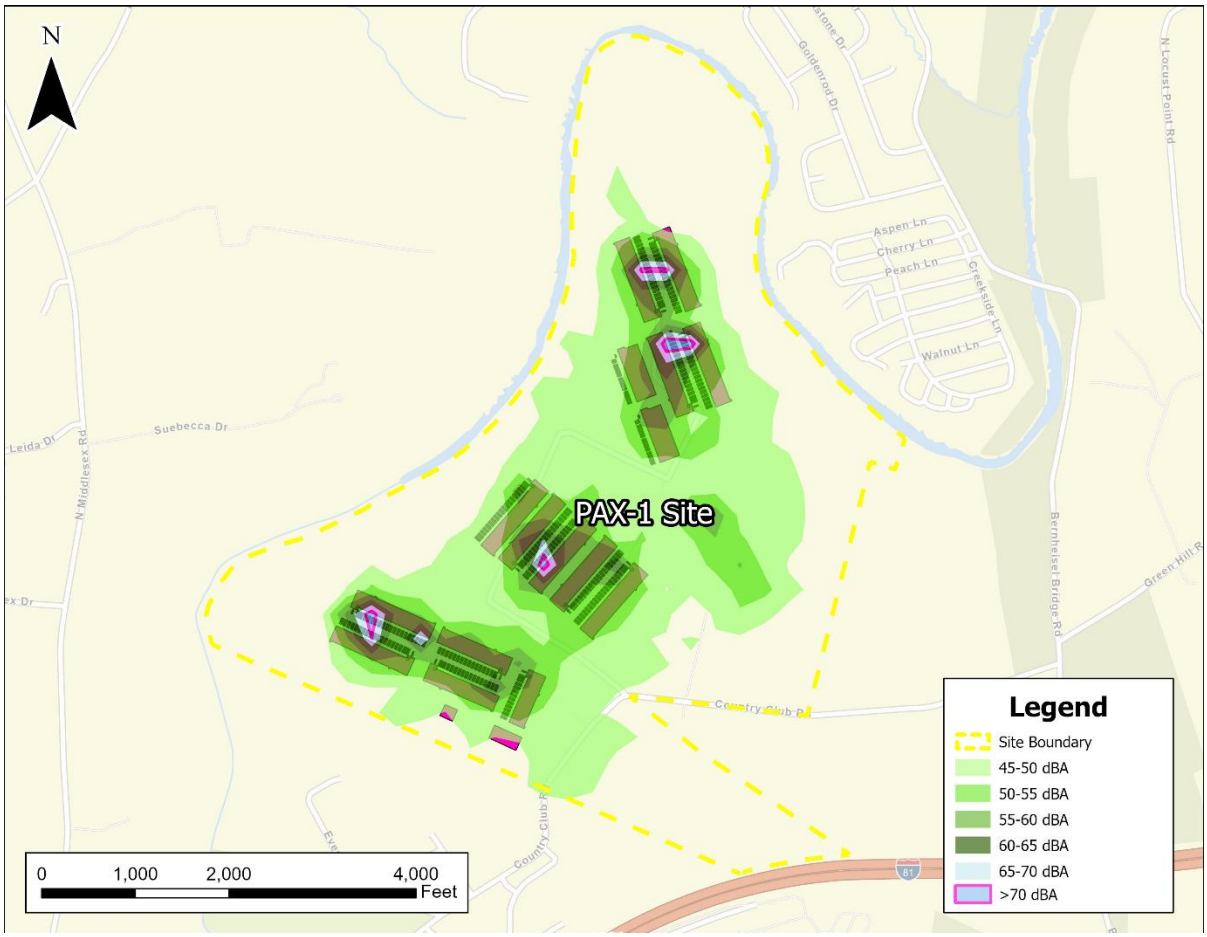
The CadnaA-predicted maximum equivalent operational noise levels for generator maintenance operations at the buildings, with the additional mitigation needed for the emergency generator scenario, would be approximately 51 dB(A) at the closest site boundary to data center buildings. This is below the limit of 70 dB(A) set by Middlesex Township for data centers. Results were calculated at points spread along on the property line around the site in all directions, with additional points every 250 feet or less along the property boundary in areas of the property boundary that were closest to residential receivers. The locations of these receivers can be seen in **Figure 3** and the associated sound levels at each receiver are presented in **Table 3**. The anticipated worst case operational noise contours for generator maintenance operations at the data center site are shown in **Figure 5**. The noise levels were calculated explicitly at each receiver for the results in **Table 3.** This can slightly vary from the contour lines, which involve back-end interpolation through a grid-based analysis.

The CadnaA-predicted maximum equivalent operational noise levels from normal operations are anticipated to remain below the site noise regulations of 70 dB(A).

Table 3: Sounds Levels at Points along the Property Boundary during Generator Maintenance Operations

Receiver Point along Property Boundary	Sound Level (dB[A])
P1	45
P2	45
P3	46
P4	46
P5	46
P6	47
P7	46
P8	47
P9	47
P10	47
P11	46
P12	46
P13	47
P14	47
P15	47
P16	47
P17	48
P18	50
P19	42
P20	50
P21	50
P22	49
P23	50
P24	50
P25	49
P26	49
P27	45
P28	47
P29	48
P30	48
P31	48
P32	48
P33	48
P34	48
P35	49
P36	49
P37	49
P38	49
P39	49
P40	49
P41	49
P42	49
P43	49
P44	49
P45	48
P46	48
P47	47
P48	45
P49	49
P50	45
P51	48
P52	49
P53	49
P54	48
P55	47
P56	44
P57	46

Figure 5: Sound Level Contours during Generator Maintenance Operations[1]



[1]The noise levels were calculated explicitly at each receiver. This can slightly vary from the contour lines, which involve back-end interpolation through a grid-based analysis.

Emergency Operations

The CadnaA-predicted maximum equivalent operational noise levels for emergency operations with all generators operating at 100% load at all buildings, as well as all equipment needed for normal operations running simultaneously, would be approximately 57 dB(A) at the closest site boundary to data center buildings. Results were calculated at points spread along on the property line around the site in all directions, with additional points every 250 feet or less along the property boundary in areas of the property boundary that were closest to residential receivers. This is below the limit of 70 dB(A) set by Middlesex Township for data centers, although emergency operations are considered to not fall under the noise limits set in the data center regulation. When considering the sound levels for the emergency scenario, the results were also compared to the octave band limits set in Table 4.19.2 of the MTZO. The octave band limits at these modeling receiver points were calculated and included in **Table 4**. The locations of these receivers can be seen in **Figure 3** and the associated sound levels at each receiver are presented in **Table 4**. The noise levels were calculated explicitly at each receiver for the results in **Table 4.** This can slightly vary from the contour lines, which involve back-end interpolation through a grid-based analysis.

The CadnaA-predicted maximum equivalent operational noise levels from normal operations are anticipated to remain below the site noise regulations of 70 dB(A). If compared to the octave band limits set in Table 4.19.2 of the MTZO, the unweighted sound levels are below the limits for all points along the property boundary in all of the octave bands set for a nonresidential district.

Table 4: Sounds Levels at Points along the Property Boundary during Emergency Operations

Receiver Point along Property Boundary	Sound Level (dB[A])	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz
P1	47	66	65	58	47	41	39	31	15
P2	47	67	66	59	47	41	39	32	17
P3	48	67	66	59	48	41	39	34	19
P4	48	68	66	59	48	42	40	34	20
P5	48	68	67	60	48	42	40	35	21
P6	48	68	67	60	48	42	40	35	22
P7	48	68	67	60	48	42	40	35	21
P8	48	68	67	60	48	42	41	35	21
P9	48	68	67	60	48	42	41	35	21
P10	49	68	67	60	48	43	41	37	23
P11	48	68	67	60	48	42	40	34	20
P12	49	68	67	60	49	43	41	34	19
P13	49	68	67	60	49	43	42	36	21
P14	49	68	67	60	49	44	42	36	20
P15	49	68	67	60	49	43	42	36	20
P16	49	68	67	60	49	43	42	34	17
P17	50	68	67	60	50	46	43	34	12
P18	51	69	68	62	51	47	45	38	24
P19	47	66	66	58	47	40	38	26	-7
P20	52	70	69	63	51	45	45	39	25
P21	55	72	72	66	55	48	48	44	34
P22	53	71	70	65	53	46	45	40	30
P23	53	71	70	64	53	46	45	40	30
P24	52	71	70	63	52	45	45	39	27
P25	51	70	69	63	51	45	44	38	27
P26	50	69	69	62	50	44	43	38	25
P27	50	69	68	62	50	43	43	34	17
P28	49	67	67	61	50	44	42	36	20
P29	50	67	67	61	50	44	43	36	20
P30	50	67	68	61	50	44	42	36	21
P31	50	68	68	61	50	44	42	35	21

P32	50	67	68	61	50	43	42	35	21
P33	50	67	68	61	50	44	42	35	22
P34	51	68	68	62	51	44	43	38	27
P35	51	68	68	62	51	45	43	36	22
P36	51	68	69	63	51	45	43	36	23
P37	51	68	68	63	52	45	43	38	26
P38	51	68	68	63	52	45	43	38	24
P39	51	68	68	63	52	45	43	37	23
P40	51	68	68	63	52	45	43	37	23
P41	51	68	68	62	52	45	43	37	23
P42	51	69	68	62	52	44	43	37	23
P43	50	69	68	61	51	44	43	37	23
P44	51	69	68	62	51	44	43	38	24
P45	50	69	68	61	51	44	43	37	23
P46	50	69	68	61	51	44	42	36	22
P47	49	67	66	60	48	43	42	35	19
P48	47	66	65	58	47	41	40	33	16
P49	50	67	67	60	49	45	45	37	19
P50	47	67	66	58	47	42	40	30	5
P51	50	68	68	61	50	45	45	34	10
P53	51	69	68	61	51	46	45	37	19
P53	51	69	68	61	51	46	44	37	19
P54	51	69	69	61	51	46	44	35	15
P55	50	69	69	62	51	45	43	33	10
P56	45	64	63	56	45	40	38	32	15
P57	51	69	69	62	52	44	43	36	17

dB(C) Results

While the Township's Zoning Ordinance does not establish numerical limits for C-weighted sound levels (dB[C]), this metric is sometimes referenced to evaluate the presence of low-frequency sound energy that may not be fully represented by A-weighted levels. Unlike dB(A), which de-emphasizes low-frequency sound in a manner consistent with human hearing sensitivity, dB(C) applies a much flatter frequency weighting and is therefore more responsive to lower-frequency components. Although there is no universally adopted regulatory criterion for dB(C), many agencies and acoustical practitioners consider overall exterior sound levels on the order of approximately 65 dB(C) to 70 dB(C), when measured at residential receivers, to be a conservative range in order to avoid for potential low-frequency issues. As part of this study, C-weighted sound levels were modeled at the relevant residential receptors using the same source assumptions and propagation conditions applied to the dB(A) analysis. Modeled C-weighted sound levels were found to be at or below approximately 64 dB(C) at all evaluated residential locations for the normal operations and generator maintenance scenario, which is below commonly referenced guidance range and indicates that the proposed use is not expected to result in excessive low-frequency noise. During the emergency operations scenario, the residential receivers are expected to be subject to dB(C) values ranging from 63-70 dB(C), which is generally within the range that is anticipated to avoid low-frequency noise issues.

At the time of this report, there are no applicable dB(C) regulations within the MTZO, and dB(C) values are being provided for informational purposes only.

The dB(C) levels in each scenario modeled are presented in **Table 5** below. This table includes the same property boundary receivers seen in **Figure 3** above, along with residential receivers labeled in **Figure 6** below. The noise analysis does not explicitly model every individual residential receptor in the surrounding area. Receptors were selected to represent the nearest and most acoustically conservative residential locations relative to the proposed noise sources. Sound levels decrease with increasing distance from a noise source due to geometric spreading, atmospheric absorption, and ground effects; therefore, residences located farther from the source than the modeled receptors can reasonably be expected to experience equal or lower sound levels under the same operating conditions.

Figure 6: Location of Residential Receptors

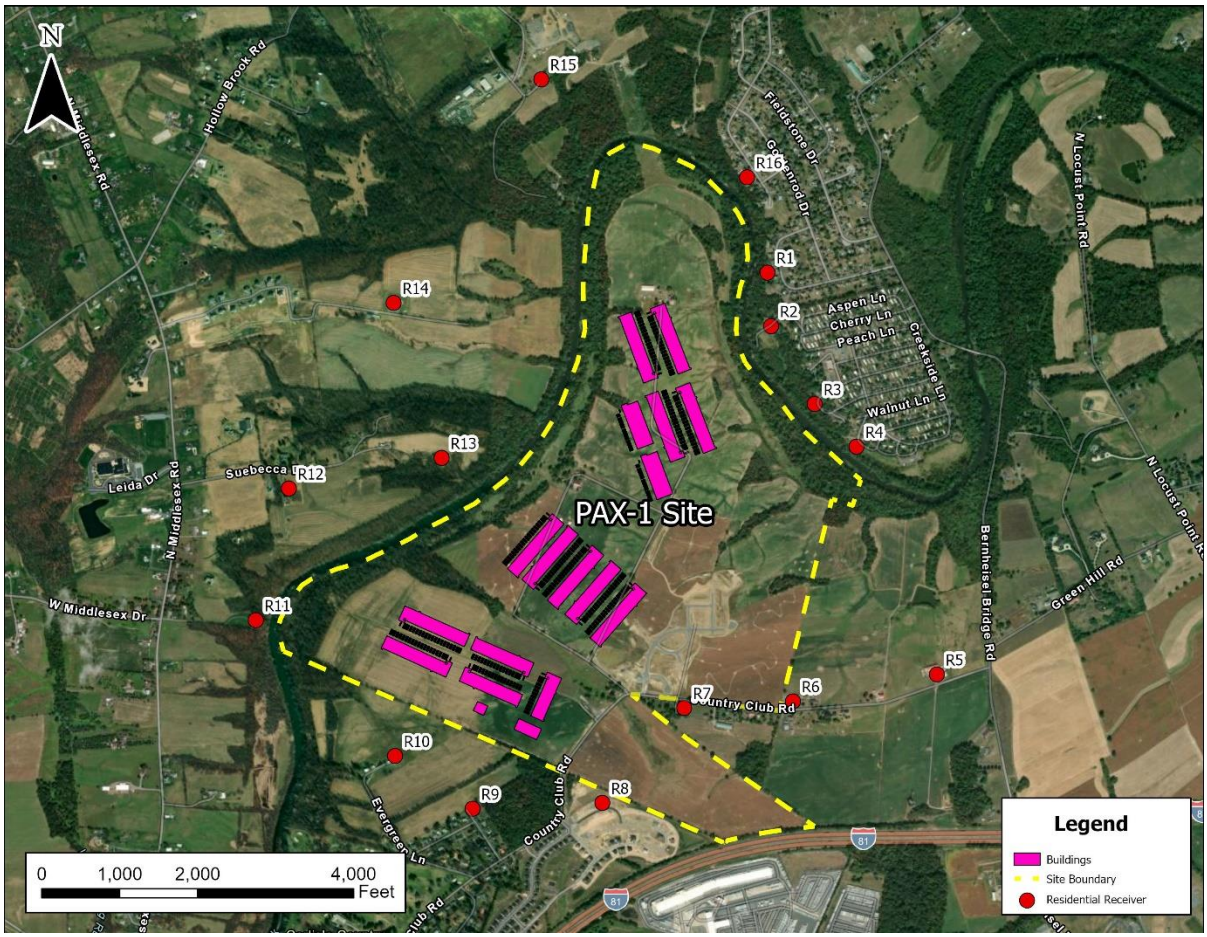


Table 5: dB(C) Sounds Levels

Receivers*	Sound Level (dB[C])		
	Normal Operations	Generator Maintenance	Emergency Operations
P1	63	63	68
P2	64	64	68
P3	64	64	68
P4	65	65	69
P5	65	65	69
P6	65	65	69
P7	65	65	69
P8	65	65	69
P9	65	65	69
P10	65	65	69
P11	65	65	69
P12	64	65	69
P13	64	65	70
P14	64	65	69
P15	64	65	69
P16	64	65	69
P17	63	63	69
P18	66	66	71
P19	59	60	68
P20	66	66	71
P21	66	67	74
P22	66	67	73
P23	66	67	72
P24	67	67	72
P25	67	67	71
P26	67	67	71
P27	60	60	70
P28	64	65	69
P29	65	65	69
P30	65	65	70
P31	65	65	70
P32	65	65	70
P33	65	65	70

P34	65	65	70
P35	65	65	70
P36	65	66	70
P37	65	66	70
P38	65	66	70
P39	65	66	70
P40	65	66	70
P41	65	66	70
P42	66	66	70
P43	66	66	70
P44	66	67	71
P45	66	66	70
P46	65	66	70
P47	63	64	68
P48	62	62	67
P49	64	64	69
P50	61	62	68
P51	62	63	70
P52	64	65	70
P53	65	65	70
P54	64	65	71
P55	63	63	71
P56	61	62	65
P57	60	62	71
R1	62	63	67
R2	64	64	69
R3	63	63	68
R4	62	62	67
R5	58	59	65
R6	62	62	70
R7	64	65	70
R8	62	62	67
R9	63	64	70
R10	64	64	70
R11	48	48	56
R12	60	61	66
R13	63	64	68
R14	59	59	63

R15	42	43	53
R16	60	60	64

*Receivers along the property boundary are denoted by ‘P#’, while the residential receivers are denoted ‘R#’.

Conclusions

The proposed PAX-1 data center site is generally located north of Country Club Road and Interstate Highway 81, south and east of Conodoguinet Creek, and west of Bernheisel Bridge Road. The PAX-1 site will be located on residential farmland that is surrounded by unified development areas, general industrial, and other residential farmland with some suburban residential properties nearby.

A noise limit of 70 dB(A) measured at the property boundary was established for this site by the Middlesex Township Zoning Ordinance. It should be noted that operational noise from emergency generator equipment in the case of a power outage does not fall under this noise limit in the Middlesex Township regulations. The emergency scenario would fall back under the standard noise nuisance ordinance, where the nonresidential district octave band limits were analyzed against the emergency scenario.

After modeling and analyzing the anticipated operational noise levels at the proposed PAX-1 site, along the site boundary, it was determined that CadnaA-predicted maximum equivalent operational noise levels are anticipated to be approximately 50 dB(A) at the point along the property boundary closest to the proposed data center buildings during normal operations with fans at maximum capacity. For the generator maintenance scenario, maximum equivalent operational noise levels are anticipated to be approximately 51 dB(A) at points along the property boundary. Both scenarios are significantly under the limit of 70 dB(A).

Emergency generator usage during a power outage was analyzed using the nonresidential octave bands requirement. Using additional sound walls, the octave band values are below the limits of the MTZO nuisance table during this initial concept plan. This site is anticipated to be within all Middlesex Township noise limits for the proposed data center site.