

Plug Power Inc. ("Plug") and Genesee County Economic Development Center ("GCEDC") respectfully submit the following answers and materials in response to public comments received at the June 20, 2022 meeting of the Town of Alabama (the "Town") Planning Board regarding the proposed substation project at the Science and Technology Advanced Manufacturing Park ("STAMP"). We sincerely appreciate the Town's efforts and attention to this vital project, which will make the region an epicenter of clean energy, innovation, and economic development.

The questions below (in bold), were provided in a July 4, 2022 memorandum from Robert D. Klavoon, PE of Wendel. Furthermore, we have attached the answers to questions from the Public Comment Session on May 16, 2022, which were previously submitted by O'Connell Electric Company, Inc., attached hereto as Exhibit A. Both Plug and GCEDC are available at any time to discuss any of these responses in more detail, prior to the July 25, 2022 meeting of the Town Planning Board.

1. Location of the Substation

- a. Since the substation was moved to its new location, is GCEDC proposing to build anything else in the "wetland area" where the substation was originally planned to go?**

The GCEDC does not have any plans, nor has applied for any permits, to impact wetland #9 where the original location of the substation was proposed.

- b. Better describe/illustrate the original location of the substation and how it relates to the current proposal.**

GCEDC completed the most recent master plan update back in 2015; at that time, the substation was placed in the north end of the site, consistent with the 2012 Generic Environmental Impact Statement ("GEIS"). At that time, the detail design and engineering had not been completed, but the GCEDC provided a rough size and dimension of the substation, depicted by a rectangle on the concept plan. Actual design and engineering details (which dictate the layout of the station) were later put together and approved by the New York Power Authority ("NYPA") and National Grid. As a result of the design, the previous layout of the station would not allow the feeder lines to come out on the western end of that station (where they would have needed to hook in) due to the presence of wetland #9 ("W9"), as shown on the map attached hereto as Exhibit B. Instead, the substation needed to be moved to allow feeder lines to hook into the substation without disturbing wetland #9.

To meet the buildable acreage requirements of the site (as shown in Exhibit 6 from the Second Incentive Zoning Agreement signed with the Town in 2017), the substation either had to move north or further east. Based on the detail design and engineering, the preferred alternative was to move the substation north and connect with the 345 kV power lines. Moving the substation further east would have placed it closer to residential homes, the hamlet, and further from the 345 kV power lines. To maximize setbacks to neighboring properties, the substation was moved as far west as possible without impacting wetland #9.

- c. Is there an issue with the Tonawanda Nation of Indians that necessitated the new proposed location for the substation?**

There was no issue with the Tonawanda Seneca Nation that necessitated moving the substation.

- d. This entire area is very wet, isn't the wetland area larger and how will the 'wetness' of the area impact the project?**

The site location is specifically chosen, in part, to avoid impacts to wetlands under the jurisdiction of the New York State Department of Environmental Conservation ("DEC") and/or United States Army Corps of Engineers ("Army Corps"). Please refer to the answer in 1(b) for more detail.

- e. How will construction activities impact adjacent property - changes in water flow to existing wetlands that will be disturbed by the project?**

Construction activities will be conducted in accordance with the Stormwater Pollution Prevention Plan ("SWPPP") and any best management practices and requirements of applicable laws and regulations. Furthermore, all proposed activities must comply with applicable requirements of the DEC concerning protection of wetlands, waterbodies, and stormwater discharges.

- f. Considering the potential impact of the substation (visual and sound) to residences, what other site options are there for the Plug Power substation?**

Every effort is being, and will be, made to minimize visual impacts as much as possible. Such efforts include the use of berms and planting vegetation. Initial planting will provide increased cover over time, through the growth of the plantings. The applicant is also willing to install screening fences; however, these fences would have to be located on the property lines between transmission rights of way and affected property owners. As a result, screening fences would require the consent of affected property owners. Please refer to the three-dimensional model, which depicts exact visual approaches from any viewpoint.

Regarding sound-related inquiries, please refer to our answer in question 3. A sound study was performed pursuant to the GEIS process, the results of which would indicate minimal sound impacts. Please see the results of which are attached in Exhibit C, with notable reference to pages 17-21 of that attachment. The noise levels from the substation will have noise consistent with ambient noise levels and requirements listed in the sound study in the GEIS.

2. Impacts to surrounding homes/properties

- a. Provide more realistic renderings from Houses 1050, 1062, 1059, and 1073 Lewiston Road. If necessary, provide these renderings from the rear of the properties at 1050 and 1062, looking south. Also, can the renderings include how it will look from the second floor of these homes?**

Please refer to the three-dimensional model provided along with this submission.

- b. Will the applicant be replacing the trees to offset the removal of the trees needed for this project? If so, how many and where?**

Certain tree removal will be necessary for the construction of this project. Only trees necessary for completion of the project will be removed, and as a result, cannot be replaced. However, every reasonable effort will be undertaken to minimize visual impacts through supplemental vegetation plantings and berms. Please refer to the answer in question 1(f).

- c. Applicant to provide an overall STAMP site map that clearly shows the identified and approved NYSDEC/USACOE delineated wetland areas on the site.**

Please see attached Exhibit B.

- d. Is the area where the substation was to be located now a NYSDEC/USACOE delineated wetland?**

The previously proposed location of the substation potentially impacted wetland #9, as depicted in Exhibit B. The currently proposed footprint was specifically chosen, in part, to avoid wetland impacts. Please refer to Exhibit B for more detail.

- e. Will future development at STAMP come closer to the homes?**

The Town of Alabama approved the final zoning regulations for the three Technology Districts in 2012 that are at the STAMP site. As part of that zoning there is a 300-foot area around the perimeter of the STAMP site that remained zoned Agricultural/Residential. No manufacturing facilities can be built in that 300-foot area. The Technology District codes do not have any setback requirements so the closest a facility could be located to the residences would be 300 feet. All future projects at STAMP will have to go through a site plan approval process with the Town of Alabama.

3. Noise

- a. Explain what will be different about the noise levels from the proposed 345/115 lines versus what is already there now?**

There will be no difference in the noise level of the new 345 kV lateral lines that will run from the present transmission corridor to the STAMP substation. New laterals will not change the noise level.

- b. What are the current noise readings on Lewiston Road with the current powerline configuration versus what will be proposed?**

The substation will not have a material impact or change to the noise levels on Lewiston Road as compared to the current powerline configuration.

- c. Why is the threshold 45 decibels? Will the noise create health issues? Will the combination of the powerlines and the substation create more health problems?**

The substation project will not create noise or health issues. The substation will adhere to Section 5 of the IEEE C96.6 Standard for Safety Levels, with Respect to Human Exposure to Electromagnetic Fields. Please refer to the sound study results attached hereto as Exhibit A. The 45-decibel level was set in the GEIS as the baseline noise level that projects would be analyzed against as part of the SEQR approval process. For comparative reference, a normal conversational level usually is around 60-decibels. The 45-decibel level is consistent with NYSDEC guidelines for nighttime limits.

4. Wildlife

- a. Resident would like a letter from the NYSDEC stating that there will be no impact to his purple martin's that he is breeding. What is the NYSDEC's overall position on the impact on wildlife?**

The applicant would likely be unsuccessful in prompting the DEC to provide the resident a letter regarding the purple martin. The purple martin is not a threatened or endangered species under the New York State Environmental Conservation Law and is therefore not subject to Part 182 incidental taking requirements. It would be atypical for a regulatory agency to comment on a species outside of its regulatory jurisdiction. The resident could directly request a letter from the DEC, but the agency may be unwilling to comment on this topic.

That said, all efforts to mitigate environmental impacts, including habitat impacts, have been comprehensively analyzed pursuant to the environmental impact statement process. Furthermore, all aspects of this project will be done in compliance with any regulatory requirement concerning threatened and/or endangered species. As a green, renewable energy company, Plug highly values environmental stewardship and is available to individually meet with the resident regarding his concerns about purple martins.

5. Please have the applicant provide information on the projected loss of property values due to the proposed project.

We respectfully submit that it would be highly speculative and incalculable to predict any potential changes in property values. Furthermore, additional employment, economic and infrastructure development, and enhanced regional career opportunities stemming from the Gateway Hydrogen Generation Facility could like offer substantial benefits – including potential increases in real property values.

6. Please provide a clarification of the two types (and voltages) of power lines that will be present on site. Provide a clear exhibit that shows the limits of each line and ownership thereof.

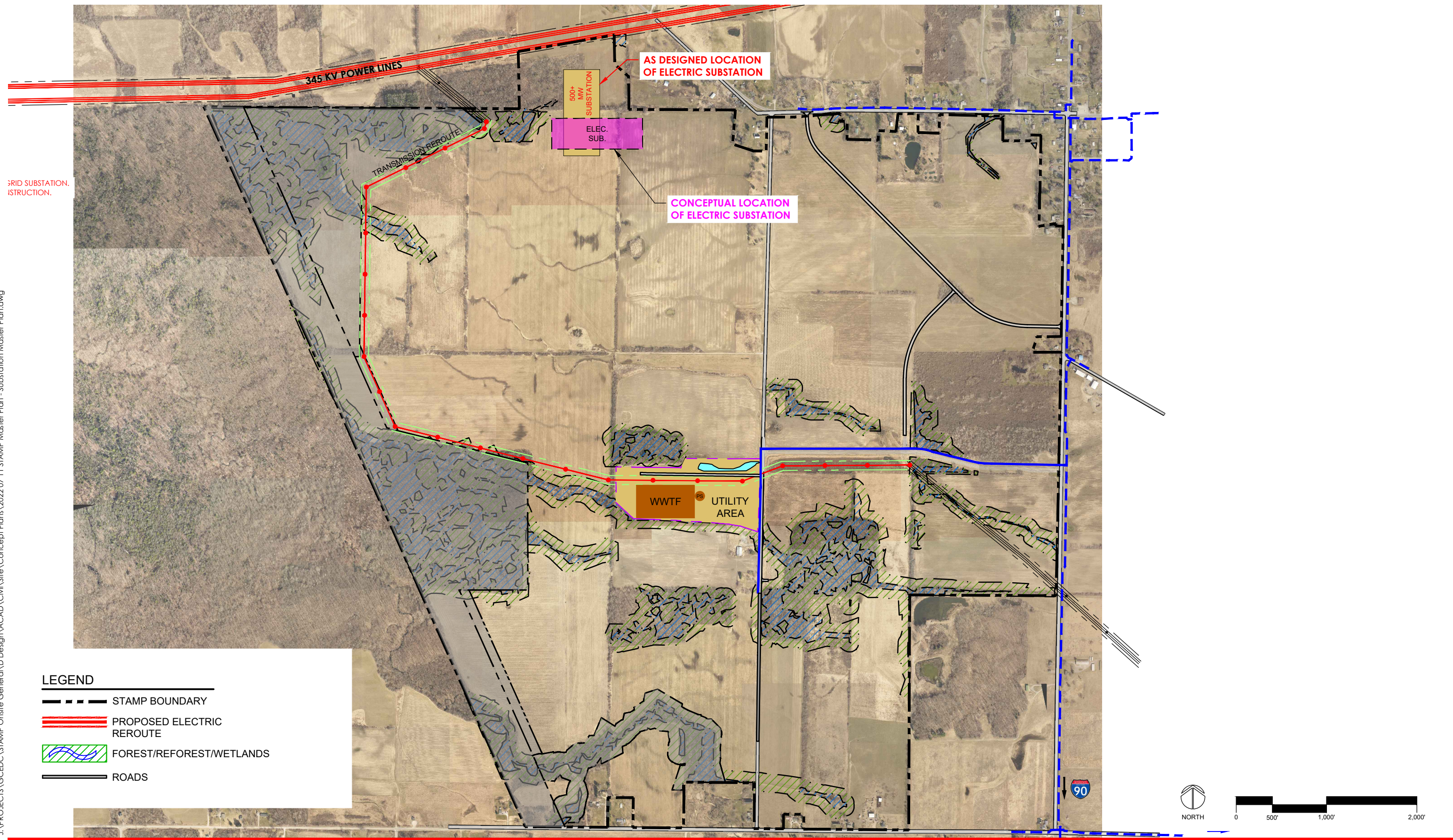
Currently, two utility 345 kV transmission lines run past properties adjacent to the project site. The lateral lines that will feed the substation will also be 345 kV, and transverse towards the substation (away from neighboring properties). 115 kV lines will be located on the low voltage side of the substation and are far away from, and will not affect, homes in the vicinity.

7. Provide a definition of “No Significant Environmental Impact”

Without further explanation, we respectfully submit that the posed question potentially alludes to concepts related to the State Environmental Quality Review Act (“SEQRA”) process. Specifically, SEQRA negative declarations determinations require a finding that an action will not have a “significant adverse environmental impact.” If a different question is being posed, we are available to discuss further at the Planning Board’s convenience.

Lastly, we would like to convey the seriousness with which we undertake any environmental considerations. This project is, and will, undertake all reasonable measures to preserve habitat as much as practicable, and minimize any potential visual and/or sound impacts discussed throughout these answers. As previously stated, we are available at any time to discuss these questions in further detail with members of the Planning board and/or any members of the public.

J:\PROJECTS\GCEDC\STAMP Onsite General\Design\ACAD\Civil\Site\Concept Plans\2022.07.11 STAMP Master Plan - Substation Master Plan.dwg

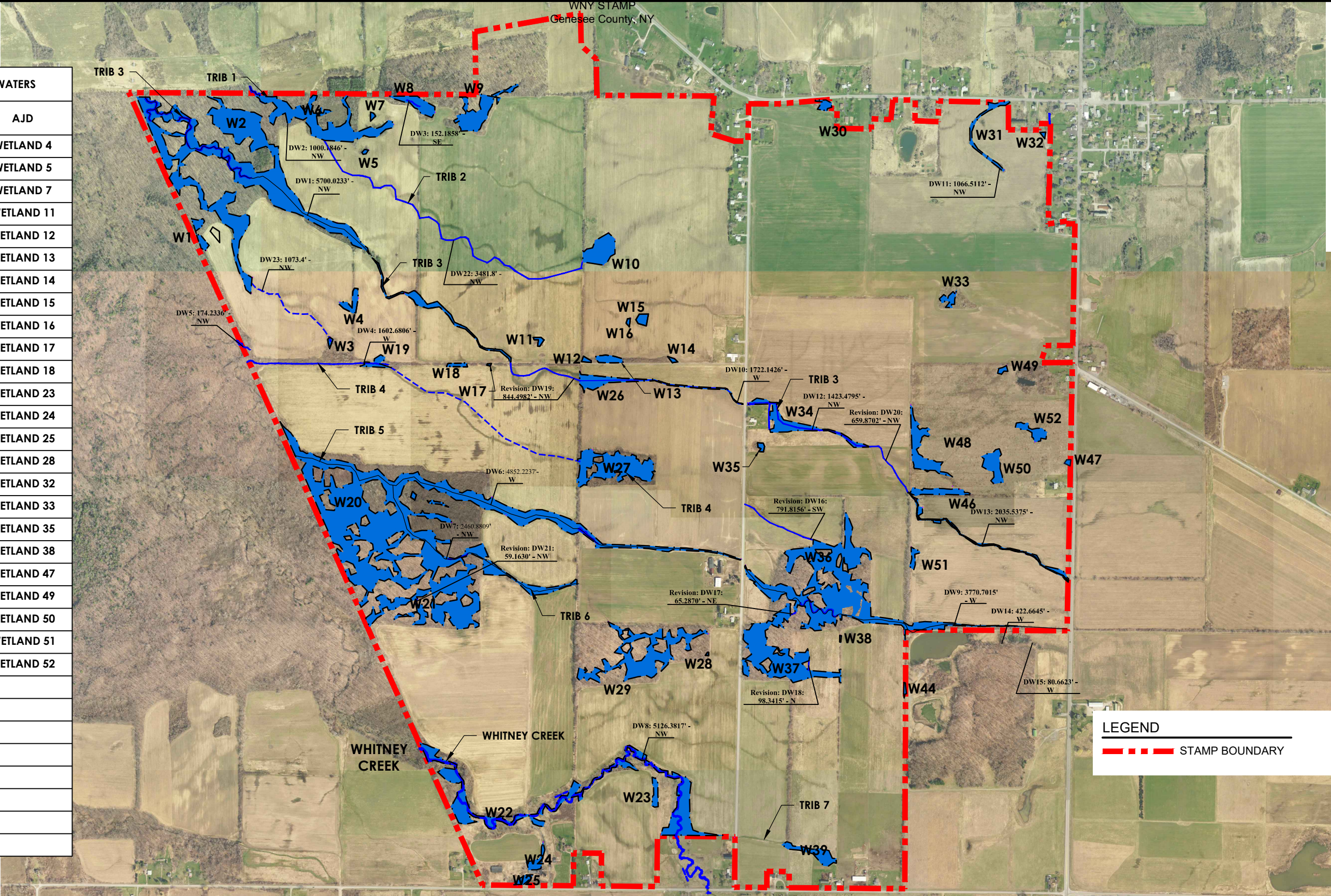


STAMP - MASTER PLAN

WNY SCIENCE AND TECHNOLOGY ADVANCED MANUFACTURING PARK (STAMP)

JULY 2022

TABLE OF NWPR WATERS	
PJD	AJD
TRIBUTARY 1	WETLAND 4
TRIBUTARY 2	WETLAND 5
TRIBUTARY 3	WETLAND 7
TRIBUTARY 4	WETLAND 11
TRIBUTARY 5	WETLAND 12
TRIBUTARY 6	WETLAND 13
TRIBUTARY 7	WETLAND 14
WETLAND 1	WETLAND 15
WETLAND 2	WETLAND 16
WETLAND 3	WETLAND 17
WETLAND 6	WETLAND 18
WETLAND 8	WETLAND 23
WETLAND 9	WETLAND 24
WETLAND 10	WETLAND 25
WETLAND 19	WETLAND 28
WETLAND 20	WETLAND 32
WETLAND 21	WETLAND 33
WETLAND 22	WETLAND 35
WETLAND 26	WETLAND 38
WETLAND 27	WETLAND 47
WETLAND 29	WETLAND 49
WETLAND 30	WETLAND 50
WETLAND 31	WETLAND 51
WETLAND 34	WETLAND 52
WETLAND 36	
WETLAND 37	
WETLAND 39	
WETLAND 42	
WETLAND 43	
WETLAND 44	
WETLAND 46	
WETLAND 48	



LEGEND

--- STAMP BOUNDARY

DELINEATED WETLANDS AND STREAMS - UPDATED MARCH 2021
WMY SCIENCE TECHNOLOGY ADVANCE MANUFACTURING PARK
TOWN OF ALABAMA, GENESEE COUNTY, NY
MARCH 2021

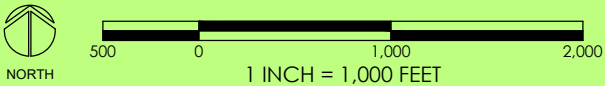


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Transportation • Renewable Energy • Service & Maintenance • Technical Services*

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Evaluation of Existing Ambient Sound Levels for STAMP

PREPARED FOR: STAMP Project Team

PREPARED BY: Mark Bastasch, P.E., INCE/CH2M HILL

DATE: February 28, 2011

Summary

This memorandum presents the ambient sound measurements collected in the vicinity of the proposed STAMP project area near the hamlet of Alabama, New York. The purpose of this effort was to document the range in existing sound levels.

The ambient sound level monitoring was conducted between December 1 and December 10, 2010 at six locations. Sound level metrics collected included L_{eq} (average) and L_{90} (residual or background) levels. The resulting trends are as expected: noise levels are generally greater during the day than at night. Weather during the monitoring event was variable and included periods of snow. Sound levels reported during the monitoring period ranged from approximately 18 dBA to 73 dBA.

Noise Survey

The ambient noise survey was conducted between December 1 and December 10, 2010 at six locations. Continuous, ten-minute average noise measurements were collected at the six monitoring stations indicated in Figure 1 using Larson Davis 820 and 824 Type 1 (precision) and Larson sound level meters. Each sound level meter was programmed to record a number of statistical parameters including A-weighted L_{eq} and L_{90} .

Each meter had been factory calibrated within the previous 12 months and was field calibrated before and after each measurement series with a Larson Davis CAL200 field calibrator. The sound level meters were housed in waterproof enclosures and the microphones were mounted at an approximate height of 5 feet within a Larson Davis environmental protection shroud.

A Davis Vantage Pro Weather Station was deployed to document local weather conditions within the project area. Weather conditions during the monitoring were variable, and typical of winter conditions. Precipitation events, including snow, occurred at the beginning and at the end of the monitoring period.

FIGURE 1
Monitoring Locations



Monitoring Results

Table 1 presents maximum and minimum sound levels during the monitoring period. The measured L_{eq} and L_{90} were plotted as time series for each monitoring station and are presented in Appendix A. The results indicate that the sound level at any single location will vary substantially over time.

TABLE 1
Summary of Measured Sound Levels (dBA)

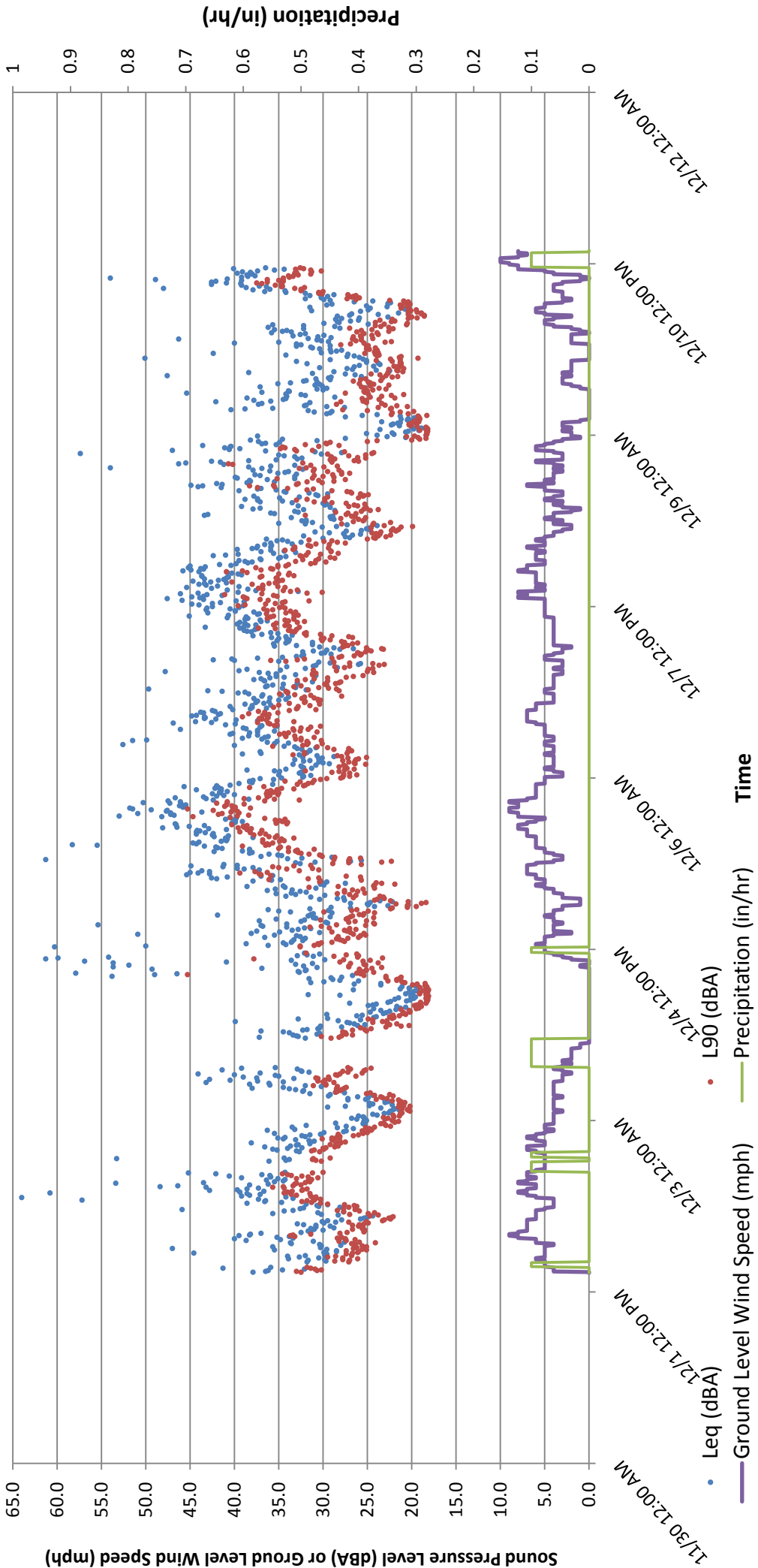
Monitoring Station	Maximum L_{eq}	Minimum L_{eq}	Maximum L_{90}	Minimum L_{90}
1	64	19	45	18
2	63	41	52	22
3	66	26	60	18
4	63	18	43	17
5	72	25	46	23
6	73	20	48	18

Appendix B provides a general description of the metrics presented in this analysis, such as the L_{eq} , and L_{90} .

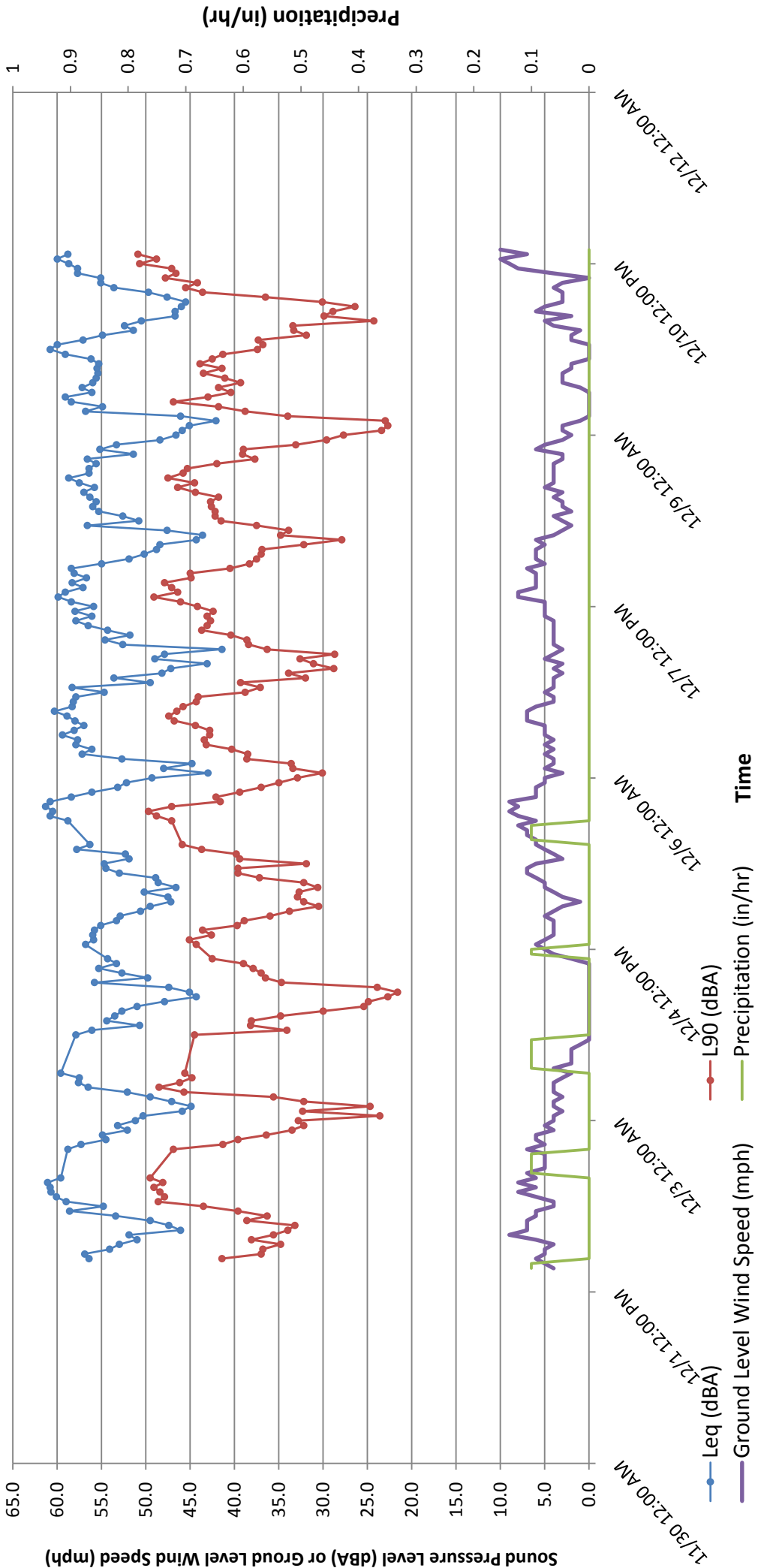
APPENDIX A

Measurement Results

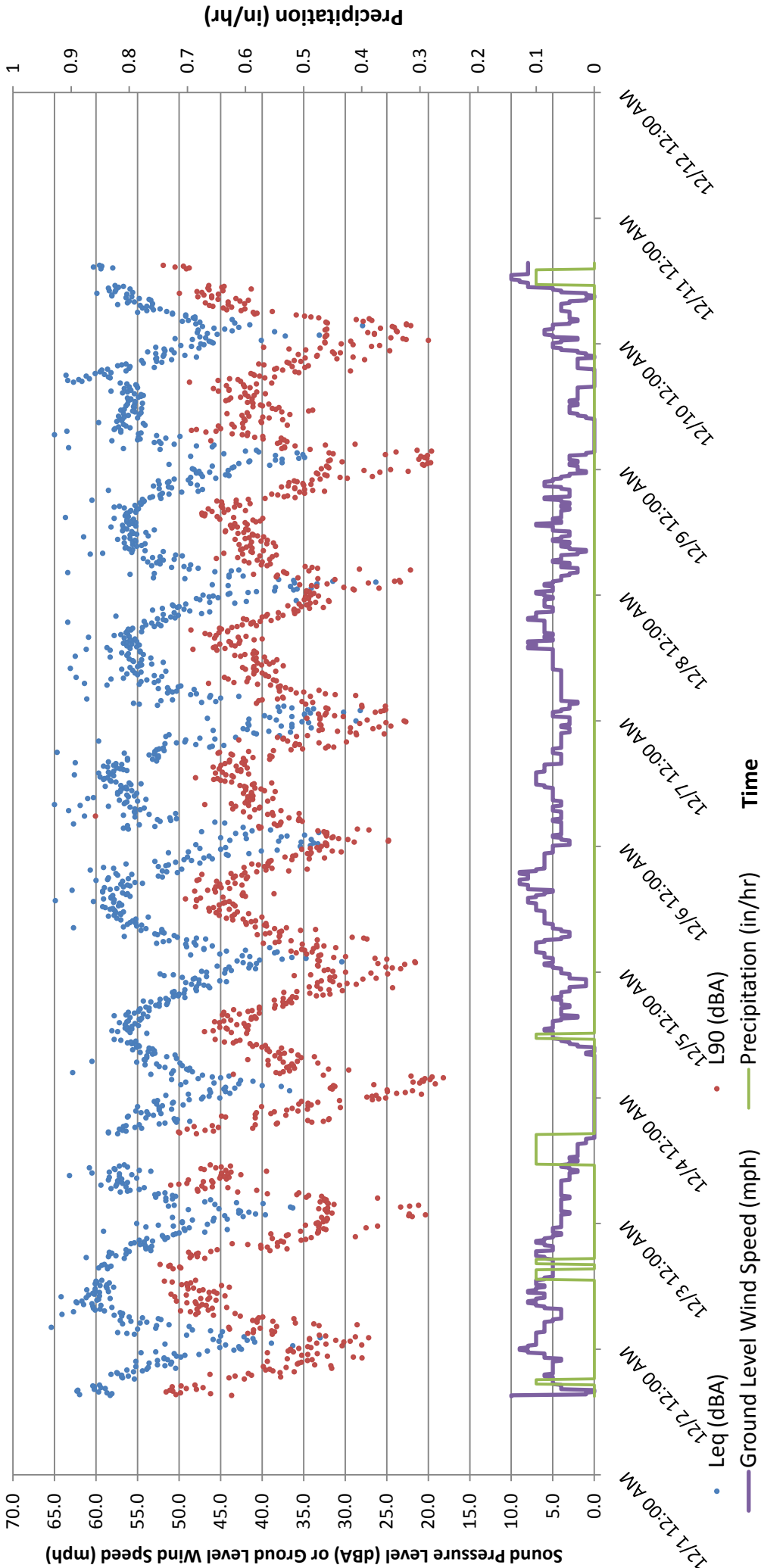
STAMP-1
Sound Level Time Series



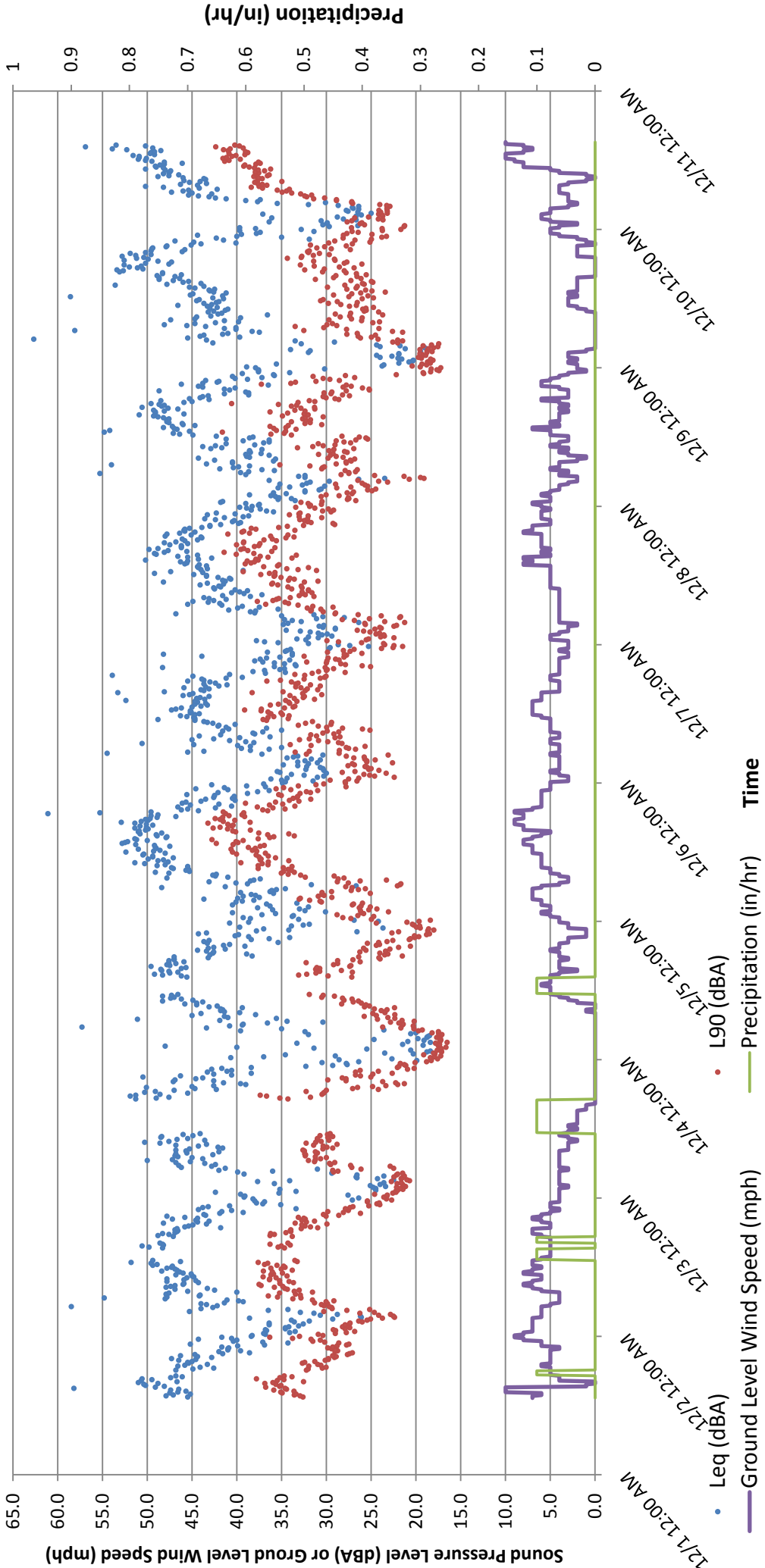
STAMP-2
Sound Level Time Series



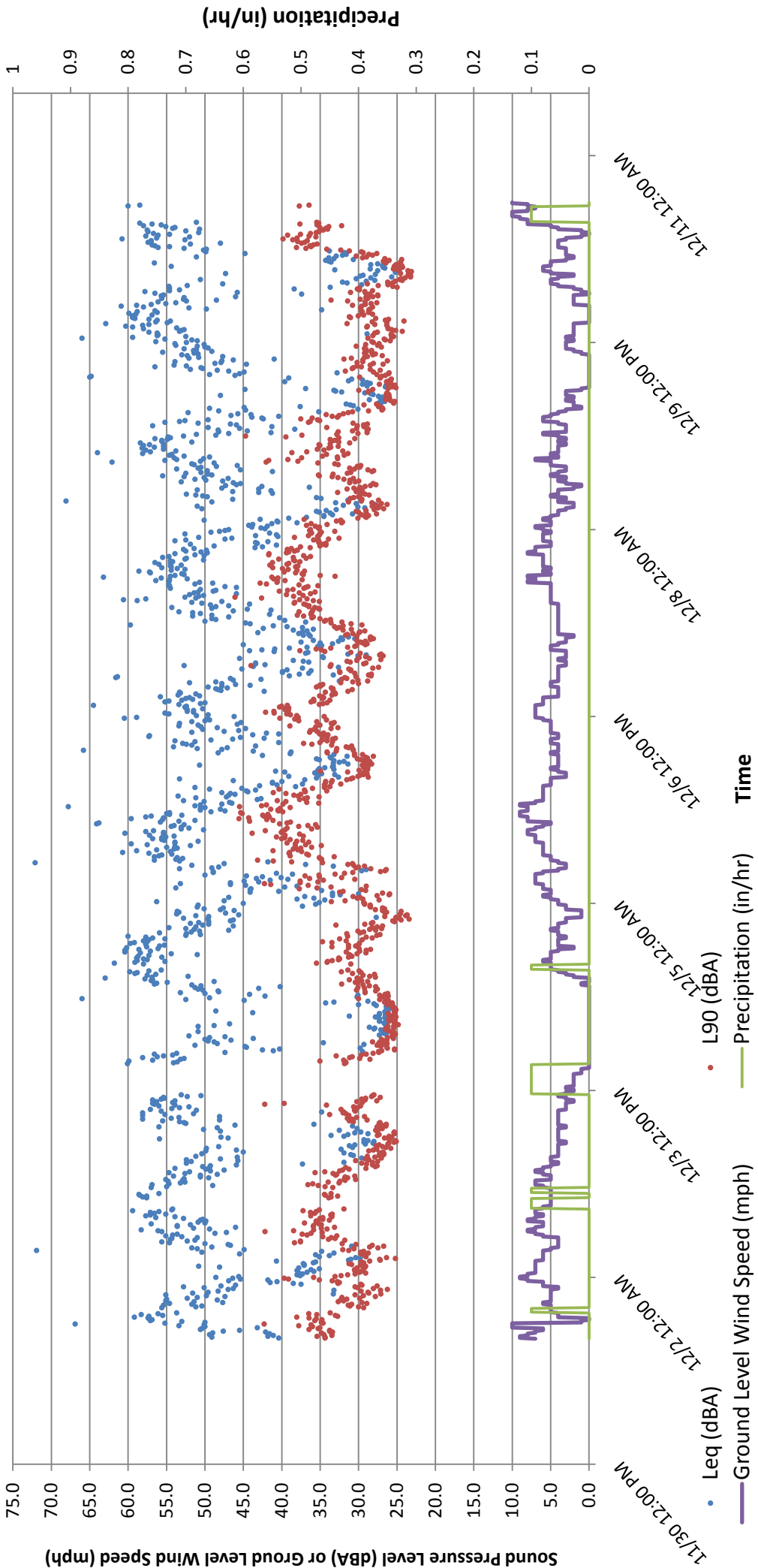
STAMP-3



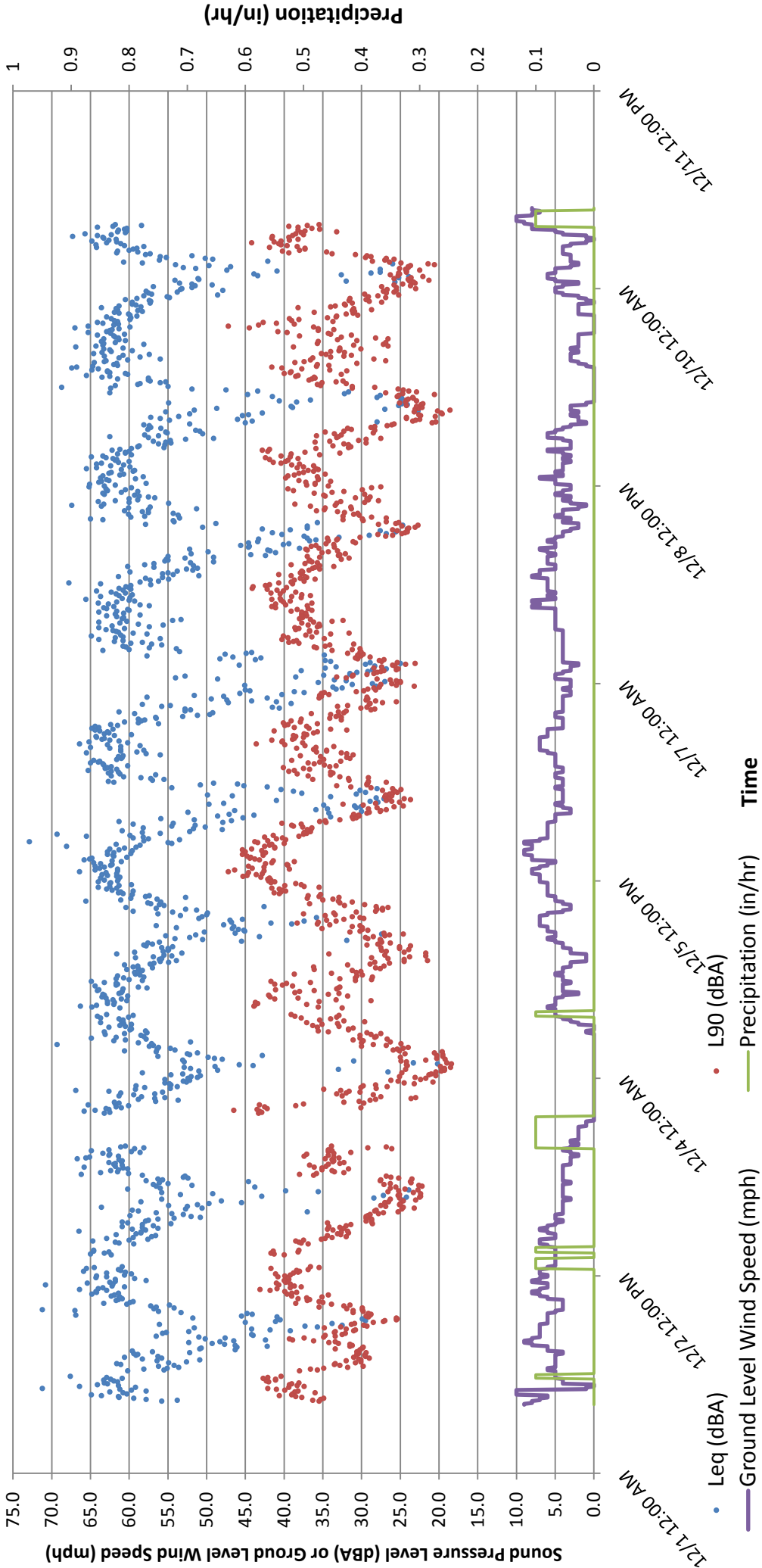
STAMP-4
Sound Level Time Series



STAMP-5
Sound Level Time Series



STAMP-6
Sound Level Time Series



APPENDIX B

Fundamentals of Acoustics

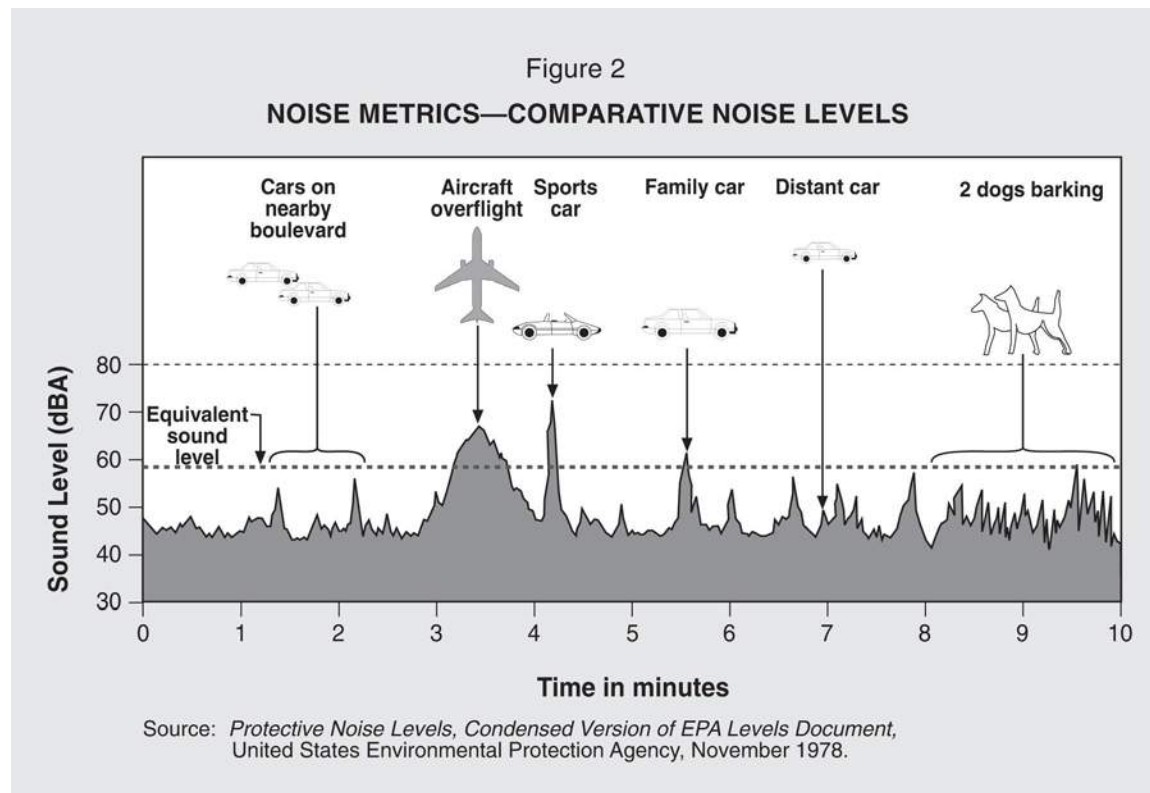
Fundamentals of Acoustics

It is useful to understand how noise is defined and measured. Noise is generally defined as unwanted sound. Airborne sound is a rapid fluctuation of air pressure above and below atmospheric pressure. There are several ways to measure noise, depending on the source of the noise, the receiver, and the reason for the noise measurement. Table 1 summarizes the technical noise terms typical discussed in environmental noise analysis.

TABLE 1
Definitions of Common Acoustical Terms

Term	Definitions
Ambient noise level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Decibel (dB)	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the measured pressure to the reference pressure, which is 20 micropascals.
A-weighted sound pressure level (dBA)	The sound pressure level in decibels as measured on a sound level meter using the A-weighted filter network. The A-weighted filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Sound Level (L_{eq})	The L_{eq} integrates fluctuating sound levels over a period of time to express them as a steady-state sound level. As an example, if two sounds are measured and one sound has twice the energy but lasts half as long, the two sounds would be characterized as having the same equivalent sound level
Day-Night Level (L_{dn} or DNL)	The Day-Night level (L_{dn} or DNL) is a 24-hour average L_{eq} where 10 dBA is added to nighttime levels between 10 p.m. and 7 a.m. For a continuous source that emits the same noise level over a 24-hour period, the L_{dn} will be 6.4 dB greater than the L_{eq} .
Statistical noise level (L_n)	The noise level exceeded during n percent of the measurement period, where n is a number between 0 and 100 (for example, L_{50} is the level exceeded 50 percent of the time)

The measurement and description of environmental sound levels is not a simple task. Consider typical sounds in a suburban neighborhood on a normal or “quiet” afternoon. If a short time in history of those sounds is plotted on a graph, it would look very much like Figure 2. In Figure 2, the background, or residual sound level in the absence of any identifiable noise sources, is approximately 45 dB. During roughly three-quarters of the time, the sound level is 50 dB or less. The highest sound level, caused by a nearby sports car, is approximately 70 dB, while an aircraft generates a maximum sound level of about 68 dB. The following provides a discussion of how variable community noise is quantified.



One obvious way of describing noise is to measure the maximum sound level (L_{\max})—in the case of Figure 2, the nearby sports car at 70 dBA. The maximum sound level measurement does not account for the duration of the sound. For example, the aircraft in this case is not as loud as the sports car, but the aircraft sound lasts longer.

A-weighted sound levels typically are measured or presented as equivalent sound pressure level (L_{eq}), which is defined as the average noise level, on an equal energy basis for a stated period of time, and is commonly used to measure steady-state sound or noise that is usually dominant. Statistical methods are used to capture the dynamics of a changing acoustical environment. Statistical measurements are typically denoted by L_{xx} , where xx represents the percentile of time the sound level is exceeded. The L_{90} is a measurement that represents the noise level that is exceeded during 90 percent of the measurement period. Similarly, the L_{10} represents the noise level exceeded for 10 percent of the measurement period.

BIDDER TECHNICAL DATA REQUIREMENT

The seller / bidder shall provide the following technical data (section 4.1), and guaranteed data (section 4.2) with bid for the transformer. In the event of award, the seller must submit correct values of the following

4.2 THE BIDDER GUARANTEES THE FOLLOWING DESIGN CHARACTERISTICS:



a)	Efficiency at unity power factor At 360MVA Load (not including fan and/or pump losses if applicable): Not less than (at 360MVA - 345/115kV)	99,87 %	
b)	No load losses and excitation current At 90% excitation voltage: Not more than At 100% excitation voltage: Not more than At 110% excitation voltage: Not more than (at 360MVA - 345/115kV)	No load Losses - Excitation current 113kW - 0,25% 146kW - 0,50% 212kW - 1,15%	
c)	Load losses at 65°C, 345kV and 115KV at 600MVA Copper Loss Stray Load Loss Composite Load Loss Auxiliary Losses	345KV ~475 kW After a kW definitive kW design kW	115KV ~340 kW After a kW definitive kW design kW
d)	Positive Sequence Impedance at 360MVA Tap Positions: - X% Mid-Point +X%	Tolerance according to ANSI C57.12.00 ~6,3 % 7,2 % ~8,4 %	
e)	Zero Sequence Impedance at 360MVA Tap Positions: -X% Mid-Point +X%	Tolerance according to ANSI C57.12.00 ~6,3 % ~7,2 % ~8,4 %	
f)	Noise Level at 360MVA (Base MVA 3dB less than NEMA std.	at 100%Un 86 dB(A)	

4.2.1 Technical data requirements for ancillary equipment

In the event of award, the Vendor shall submit corrected values in accordance with this specification.

Distances from East Transformer to structures

Legend

-  East Transformer
-  Feature 1

1,100' to structure

715' to structure

East Transformer

1,300' to structure



Point 1

Distance from the source 1 [ft](#) ▼

Sound pressure level 86 dB

Point 2

Distance from the source 715 [ft](#) ▼

Sound pressure level 28.914 dB

Sound level difference

Difference in SPL 57.09 dB

Point 1

Distance from the source 1 [ft](#) ▼

Sound pressure level 86 dB

Point 2

Distance from the source 1100 [ft](#) ▼

Sound pressure level 25.17 dB

Sound level difference

Difference in SPL 60.83 dB

Point 1

Distance from the source 1 [ft](#) ▼

Sound pressure level 86 dB

Point 2

Distance from the source 1300 [ft](#) ▼

Sound pressure level 23.72 dB

Sound level difference

Difference in SPL 62.28 dB



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Imagery Landsat / Copernicus
Imagery NOAA

Google Earth

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Imagery Date: 9/22/2018 eye alt 682 ft

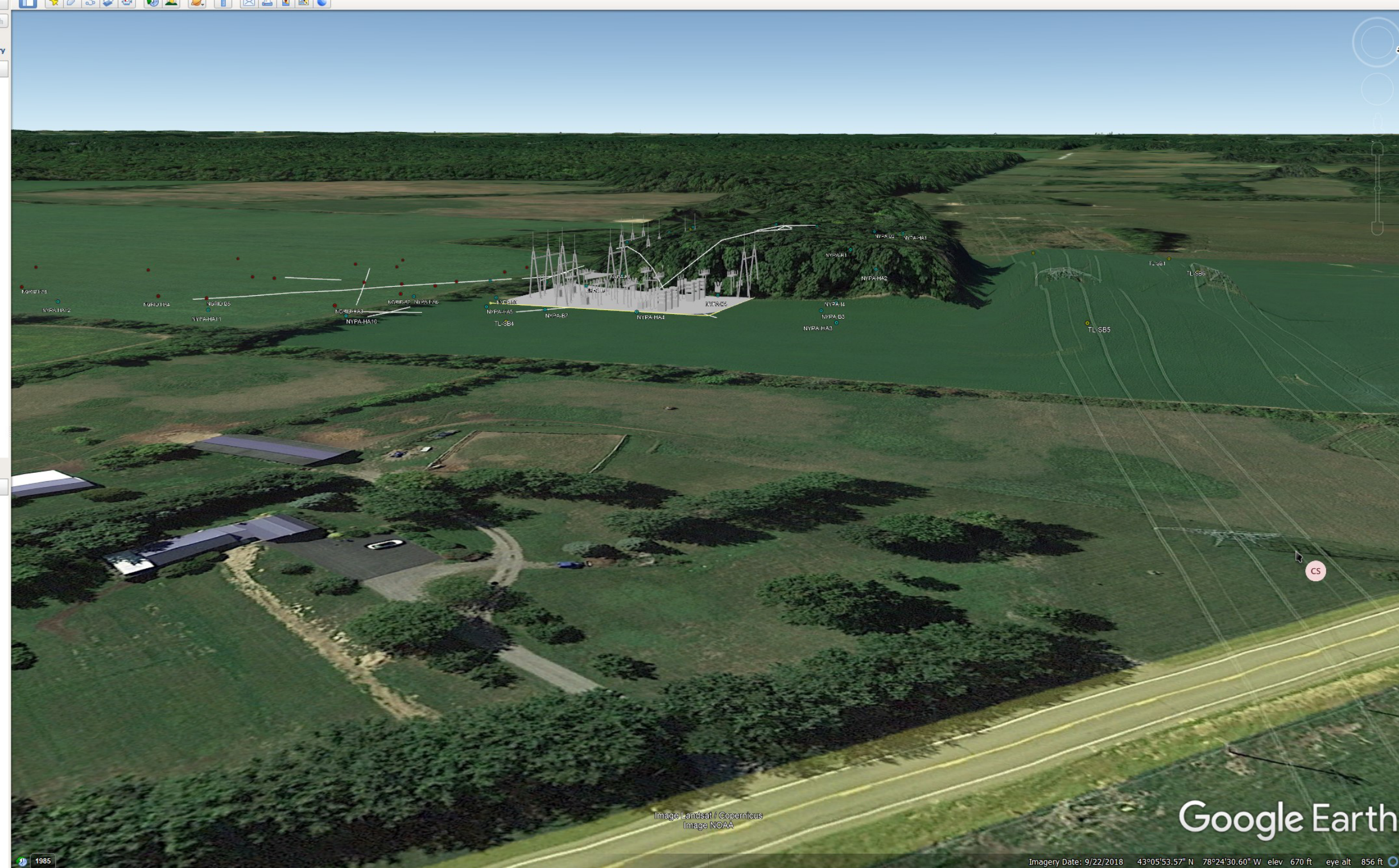


Image Landsat / Copernicus
Image NOAA

Google Earth