

Appendix D

Noise Analysis Report



**Northern Bobwhite Solar Project
Acoustic Assessment**

March 1, 2024

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NORTHERN BOBWHITE SOLAR PROJECT ACOUSTIC ASSESSMENT

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Abbreviations

AC	alternating current
dB	decibel
dBA	decibel (A-weighted)
DC	direct current
Hz	hertz
L_{eq}	equivalent continuous sound level
L_{max}	maximum sound level
MW	megawatt
Project	Northern Bobwhite Solar Project
PV	photovoltaic

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1.0 Project Description

The Northern Bobwhite Solar Project (Project) is a proposed 96-megawatt (MW) photovoltaic (PV) solar power energy generating facility located in Marion County, Kentucky. The project site is located on approximately 740 acres in the north central portion of the county (Figure 1).

Arrays of photovoltaic modules will be mounted on single access trackers arranged in rows. Power conversion systems (also called inverter stations) will be distributed throughout the Project area, comprised of one distribution transformer and a series of power inverters. The solar project will consist of inverters and a utility interconnection substation. The power generated by the proposed solar facility will be connected to the existing power grid using the transmission line currently traversing the tract. The generating facility will sell power on the wholesale market as a merchant power plant or independent power producer. The solar facility will be enclosed by a fence which will be located at least 50 feet inside of any property boundary. At the end of the project's life, the equipment and electrical infrastructure will be removed from the site and land may return to farming or other development.

Northern Bobwhite Solar, LLC (Northern Bobwhite Solar), a subsidiary of EDF Renewables, retained the services of Stantec Consulting Services, Inc. (Stantec) to conduct an acoustic assessment to evaluate Project-generated sound levels at the surrounding noise sensitive receptors in accordance with Kentucky Revised Statutes Section 278.708. An acoustic modeling analysis was conducted to estimate sound produced during both construction and operation. Operational sound sources consisted of inverter stations and the main power transformer at the onsite Project substation.

The main sources of sound emissions from the Project operations will be the solar inverter stations and a substation transformer located in the Project substation. Solar panels produce direct current (DC) voltage, which must be converted to alternating current (AC) voltage through a series of inverters. Solar energy facilities operate by converting solar radiation into electricity, meaning the Project will only produce electricity between sunrise and sunset. After sunset, the site no longer receives solar radiation, and the inverters will shift into stand-by mode.

Approximately 27 inverters will be installed in the Project area for the proposed 96-MW Project. The analysis assumed the sound power level of each inverter at full load is 93 decibels, A-weighted (dBA). One main power transformer will be installed in the Project substation. The analysis assumed the sound power level of the substation transformer is 99 dBA.

The loudest sound emissions during construction activities will be impact pile driving. The impact pile driving equipment used to install the solar array posts would generate sound levels of approximately 101 dBA at 50 feet, depending on type and brand. The analysis assumed up to three pile drivers would be operating simultaneously within a solar array. Construction activities are expected to be limited to daytime hours.

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2.0 Terminology

Sound is caused by vibrations that generate waves of minute pressure fluctuations in the surrounding air. Sound levels are measured using a logarithmic decibel (dB) scale. Human hearing varies in sensitivity for different sound frequencies, and the frequency sensitivity changes based on the overall sound level. The ear is most sensitive to sound at frequencies between 800 and 8,000 hertz (Hz) and is least sensitive to sound at frequencies below 400 Hz or above 12,500 Hz. Consequently, several different frequency weighting schemes have been used to approximate the way the human ear responds to various frequencies at different sound levels. The A-weighted decibel, or dBA, scale is the most widely used for regulatory requirements, as it discriminates against low frequency noise similar to the response of the human ear at the low to moderate sound levels typical of environmental sources. Sound levels without a frequency weighting applied, referred to as unweighted or linear, are generally reported as dB.

The sound power level (PWL) of a noise source is the acoustic power that the source emits regardless of the environment in which it is placed. Sound power is a property of the source, and therefore is independent of distance. The radiating sound power then produces a sound pressure level (SPL) at a point of which human beings can perceive as audible sound. The sound pressure level is dependent on the acoustical environment (e.g., indoor, outdoor, absorption, reflections) and the distance from the noise source. Unless otherwise stated, sound levels in this report are sound pressure levels.

Numerous metrics and indices have been developed to quantify the temporal characteristics (changes over time) of community noise. The equivalent continuous sound level, Leq, metric is the level of a hypothetical steady sound that would have the same energy as the fluctuating sound level over a defined period of time. The Leq represents the time average of the fluctuating sound pressure level. The maximum and minimum sound levels, or Lmax and Lmin, are the loudest and quietest instantaneous sound levels occurring during a period of time.

A change in sound levels of 3 decibels is generally considered to be the threshold of perception, whereas a change of 5 decibels is clearly perceptible, and a change of 10 decibels is perceived as a doubling or halving of loudness.

Examples of A-weighted sound levels in common environments are shown on Figure 2.

3.0 Regulatory Environment

A review was conducted of noise regulations applicable to the Project at the federal, state, county, and local levels. Federal, state, county, or local environmental noise requirements applicable to this Project were not identified. Noise ordinances for the unincorporated portions of Marion County as well as nearby City of Lebanon were not identified.

Kentucky Revised Statutes (KRS) Section 278.708 requires a site assessment report be completed for proposed electric generation facilities that includes "evaluation of noise levels expected to be

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produced by the facility” (KRS 278.708(3)(a)8) and “evaluation of anticipated peak and average noise levels associated with the facility’s construction and operation at the property boundary” (KRS 278.708(3)(d)). Quantifiable noise limits are not provided in KRS 278.708. This acoustic assessment was completed to address the above requirements.

4.0 Existing Noise Conditions

4.1 NOISE SENSITIVE RECEPTORS

In this analysis, noise sensitive receptors were considered to include non-participating residences, schools, churches, hospitals, parks, and cemeteries. Noise sensitive receptor locations were identified within 2,000 feet of the Project boundaries (Study area) by reviewing high resolution aerial imagery and structure data provided by Northern Bobwhite Solar. The receptor locations, named with the prefix “R” and shown on Figures 3 and 4, include 65 residential dwellings.

There is one set of residential receptors located within the Study area that meet the definition of “residential neighborhood” according to KRS 278.700, which includes populated areas of five or more acres containing at least one residential structure per acre. The neighborhood consists of eight receptors (Receptors R-01 through R-08) and is located more than 1,100 feet from the fence line in the southwestern portion of the Study Area along Radio Station Road.

Table 1 shows the nearest residential receptor locations to Project boundaries and equipment, throughout the Project area. Receptor R-25 is located approximately 1,672 feet west of the Project substation. Receptor R-56 is located approximately 262 feet west of the nearest solar panel. Receptor R-55 is located approximately 564 feet south of the nearest inverter.

Table 1. Nearest Receptors to the Project

Land use	Nearest Receptor to	Section of Study Area	Distance from Fence (ft)	Distance from Nearest Solar Panel (ft)	Distance from Nearest Inverter (ft)
Residence (R-25)	Substation	West	883	1,808	1,672
Residence (R-56)	Solar Panel	Northwest	216	262	875
Residence (R-55)	Project Fence/Inverter	Northwest	157	564	862

4.2 EXISTING NOISE FROM ADJACENT PROPERTIES

The primary sources of noise from the surrounding area are likely to be vehicle traffic on rural roads and adjacent agricultural activities, including, but not limited to, ATVs, farm machinery, irrigation,

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tractors, and trucks. State Highway 55 and Horan Lane also contribute to noise in the vicinity of the Project area. Additionally, wildlife, such as birds, cattle, insects, and frogs, contribute to the existing noise environment.

4.3 EXISTING NOISE ON THE PROJECT SITE

Existing sound sources on the Project site are likely typical of agricultural activities. These sources include ATVs, tractors, and trucks. Rural wildlife noises also contribute to the existing noise environment, including birds, frogs, and insects. Typical sound levels in a variety of outdoor environments are shown in Figure 2.

5.0 Construction Sound Assessment

5.1 SOUND SOURCES AND ASSESSMENT METHODOLOGY

Construction activities related to the development of the Project will occur over a period of approximately 12 to 18 months. Construction will occur in phases, starting with site preparation activities, such as vegetation clearing, installation of stormwater controls, and access road construction. Construction of the Project substation along with the trenching and installation of the underground electrical collection system will likely be occurring concurrently with the solar array installation activities. The construction process is progressive in nature; therefore, several locations may see activity during the same time period, with installation activities then progressing to other array sites.

Construction activities are expected to be limited to daytime hours. Heavy construction equipment including, but not limited to, backhoes, bulldozers, excavators, and haul trucks may be present and operational at different points during the first phase of the construction period. The second phase of construction at each array site will include impact pile drivers to install posts for the tracking system. This analysis assumes that up to three pile drivers may be operating simultaneously within a solar array field.

Major components of the solar facility include solar modules, a module tracking system, inverters, and a Project substation. Assembly will occur within the Project site several hundred to thousands of feet from the nearest receptors. Assembly will take place during construction hours and will be of limited duration at any given location within the Project.

Traffic noise is expected to increase temporarily during construction due to the mobilization of labor and materials, equipment and staff moving between sections of the Project, and construction and equipment vehicles entering and leaving the site.

Noise levels from construction equipment will vary by type, age of equipment, and overall condition. Typical construction equipment sound emission levels from the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) database are presented in Table 2. These sound levels are representative of typical infrastructure construction equipment

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and were used for this assessment. Pile driving was modeled assuming an L_{max} sound level of 101 dBA at 50 feet based on typical impact pile drivers used for solar energy projects. Other than pile drivers, sound levels associated with the types of equipment expected to be used will vary from approximately 74 to 85 dBA at 50 feet. For comparison, typical sound levels generated by common sources are shown in Figure 2.

The FHWA RCNM model was used to assess sound levels during construction at the nearest receptor to solar panel arrays (R-56) where pile driving would occur. RCNM accounts for the attenuation of sound with distance from equipment and estimates both L_{max} and L_{eq} sound levels. Equipment included in the RCNM model predictions included three pile drivers, one crane, one pickup truck, and one front end loader.

Table 2. Typical Construction Equipment Sound Emission Levels

Equipment Description	Acoustical Use Factor, %	Sound Level at 50 feet, dBA	
		L_{max}	L_{eq}
Backhoe	40	78	74
Compactor (ground)	20	83	76
Compressor (air)	40	78	74
Crane	16	81	73
Dozer	40	82	78
Dump Truck	40	76	72
Excavator	40	81	77
Flat Bed Truck	40	74	70
Front End Loader	40	79	75
Generator	50	81	78
Impact Pile Driver	20	101	94
Paver	50	77	74
Pickup Truck	40	75	71
Pneumatic Tools	50	85	82
Pumps	50	81	78
Roller	20	80	73
Tractor	40	84	80
Vibratory Pile Driver	20	101	94
Welder/Torch	40	74	70

Source: FHWA Roadway Construction Noise Model User's Guide.

5.2 CONSTRUCTION SOUND ASSESSMENT RESULTS

Table 3 shows the results of the construction sound modeling at the nearest receptor to Project construction activities (R-56). The table shows the expected loudest instantaneous sound level (L_{max}) as well as the average sound level (L_{eq}) due to multiple pieces of equipment operating

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simultaneously in a solar field. Because pile drivers will only be used during solar panel post installations, results have been presented both with and without pile drivers in use.

Table 3. Estimated Sound Levels at Nearest Receptor Due to Construction (Sunrise to Sunset)

Condition	Distance to Solar Array (ft)	Estimated L_{max} Sound Level (dBA)	Estimated L_{eq} Sound Level (dBA)
With pile driver	262	87	85
Without pile driver		66	64

The estimated sound levels of 64 to 87 dBA during construction are at the nearest sensitive receptor and construction sound levels are expected to be lower at other receptors.

6.0 Operational Sound Assessment

6.1 SOUND SOURCES AND ASSESSMENT METHODOLOGY

The Project, as currently proposed, includes 27 inverters within the solar generation arrays and one substation transformer, as shown in Figures 3 and 4. These are the primary operational sound sources associated with the Project. Solar panels produce DC voltage which must be converted to AC voltage through a series of inverters. Solar energy facilities operate by converting solar radiation into electricity, meaning the Project will only produce electricity between sunrise and sunset. After sunset, the site no longer receives solar radiation, and the inverters will shift into stand-by mode. During nighttime hours, the substation transformer will be energized; however, it will produce minimal sound. Thus, operational sound levels generated by the Project will be highest during daytime hours.

The solar arrays associated with the Project include single-axis tracking panels. Tracking systems involve the panels being driven by small, 24-volt brushless DC motors to track the arc of the sun to maximize each panel's potential for solar absorption. Panels would turn no more than five (5) degrees every 15 minutes and would operate no more than one (1) minute out of every 15-minute period during daylight hours. The tracking motors are a potential source of intermittent (occasional) mechanical noise.

This assessment assumed a sound power level of 93 dBA for each inverter based on manufacturer data for a SMA 4600 UP-US solar inverter. The Project substation transformer is expected to have a capacity of 107 megavolt-ampere (MVA) and the sound power level was estimated to be 99 dBA based on the NEMA TR-1 standard. The transformer noise spectra were estimated using calculation methods in the Edison Electric Institute Electric Power Plant Environmental Noise Guide. When panel tracking motors are running, the analysis assumed that the maximum sound level is 70 dBA at 1 meter (3.28 feet) based on manufacturer data for a NEXTracker Horizon Single Access Tracker.

Sound attenuates between a source and receptor location due to a variety of factors, including, but not limited to, distance between source and receptor, atmospheric absorption, ground type,

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topography, shielding from solid structures, vegetation, and meteorological conditions. Operational sound levels from the proposed Project equipment were estimated using the CadnaA model by Datakustik, which utilizes the ISO 9613-2 standard algorithms for outdoor sound propagation.

A CadnaA base model was first developed by importing topographic data from the U.S. Geological Survey National Elevation Dataset and aerial imagery. The inverter and substation transformer noise sources were then modeled as point sources within CadnaA based on the current Project layout provided by Northern Bobwhite Solar. Receptor points were added for the identified sensitive receptor locations. Additional conservative assumptions that were used to estimate daytime operational sound levels included the following:

- All inverter and substation transformer sources operate simultaneously.
- Ground attenuation factor of $G=0.5$ (on a scale of 0.0 representing hard ground to 1.0 representing porous ground).
- No sound attenuation from vegetation (foliage) to simulate a worst-case condition when leaves have fallen off trees.
- Meteorological conditions are conducive to sound propagation with all receptors located downwind of all noise sources.

6.2 OPERATIONAL SOUND ASSESSMENT RESULTS

Operational sound levels estimated using the CadnaA model for the 65 sensitive receptors identified in the vicinity of the Project area are provided in tabular format in Appendix A. The estimated sound levels represent daytime sound levels from the Project inverters and the substation transformer. The table in Appendix A also shows the distance from each receptor to the nearest inverter, substation transformer, and panel tracking system.

Sound level contours for daytime operation with all Project inverters and the substation transformer operating at full load are displayed in Figure 4. The figure displays the overall project-generated sound levels in the vicinity of the Project area and illustrates how sound is expected to propagate in the area. Table 4 provides a summary of the expected sound levels at receptors within 1,000 feet of the Project boundaries during daytime hours.

Table 4. Summary of Estimated Daytime Operational Sound Levels at Sensitive Receptors

Expected Sound Level (L_{eq})	Number of Receptors
35 dBA or less	65
35 to 40 dBA	0
40 to 45 dBA	0

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Expected Sound Level (L _{eq})	Number of Receptors
Greater than 45 dBA	0

The results of the operational sound modeling demonstrate that the highest expected daytime sound level at nearby sensitive receptors is 33 dBA at receptor R-41, which is in the southeastern portion of the study area. Nighttime operation will result in lower sound emissions, as power will not be generated and therefore the solar inverters and substation transformer will be operating in stand-by mode. A sound level of 35 dBA is comparable to a quiet suburban nighttime environment and 50 dBA is comparable to outdoor daytime sound levels in rural to quiet urban environments (Figure 2).

7.0 Summary

An operational sound analysis was completed for the Project, considering 25 solar inverters and one substation in full operation. The highest daytime sound level expected at a residence due to operation of the Project is estimated to be 33 dBA. The solar facility will generate power during daylight hours only. Sound from the inverters and substation will be minimal during the nighttime hours, due to equipment operating in an energized stand-by mode.

A construction sound analysis was completed considering impact pile driving and other typical construction equipment. Worst-case construction sound levels at the nearest residence are expected to range from 64 to 87 dBA with multiple pieces of equipment operating simultaneously. At times, construction activities will be audible to nearby residences or other sensitive receptors; however, not all equipment will be operating at the same time, and activities will be temporary in duration and spread throughout the Project area.

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8.0 References

Edison Electric Institute. Electric Power Plant Environmental Noise Guide. Volume 1 2nd Edition.

FHWA 2006. Roadway Construction Noise Model User's Guide. U.S. Department of Transportation. U.S. Department of Transportation, Federal Highway Administration, FHWA-HEP-05-054, DOT-VNTSCFHWA-05-01. January 2006.

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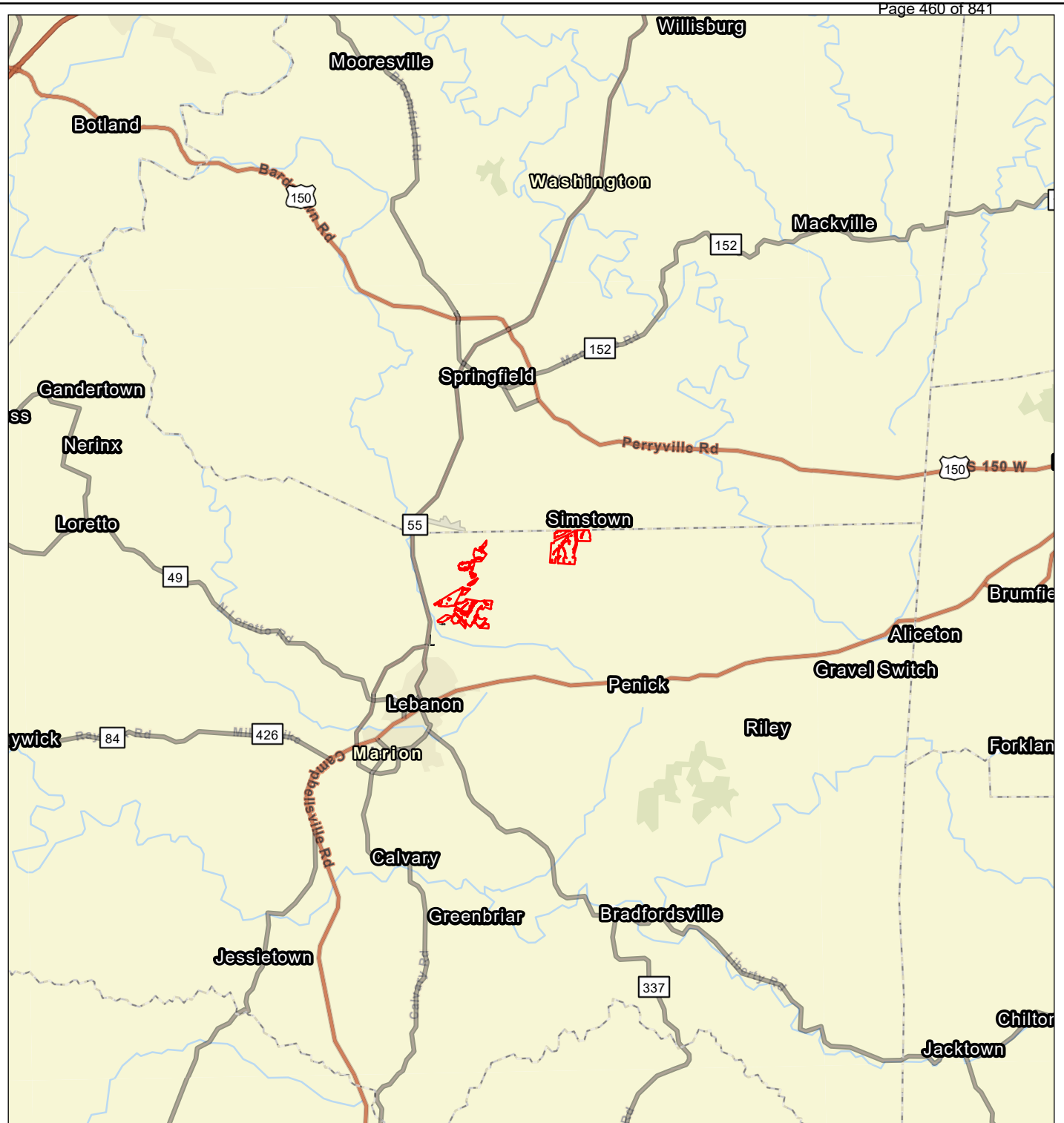
March 1, 2024

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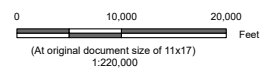
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**Figure 1
Vicinity Map**



Legend
— Project Study Area



Project Location
 Washington and Marion County, KY

Prepared by GRG on 2024-02-29
 TR by ALC on 2024-03-01
 IR by JP on 024-03-01

Client/Project
 Northern Bobwhite Solar Facility
 Noise Assessment Report

Figure No.

1

Title

Project Vicinity Map

Notes
 1. Coordinate System: NAD 1983 UTM Zone 16N
 2. Data Sources: ESRI; Stantec
 3. Background: BING Aerials Kentucky Transportation Cabinet (KYTC) Hybrid Reference Layer; City of Bardonia, Nelson County, Esri, TomTom, Garmin, SafeGraph, METI, NASA, USGS, EPA, NPS, USDA, USFWS
 4. World Street Map, City of Bardonia, Nelson County, Esri, TomTom, Garmin, SafeGraph, METI, NASA, USGS, EPA, NPS, USDA, USFWS

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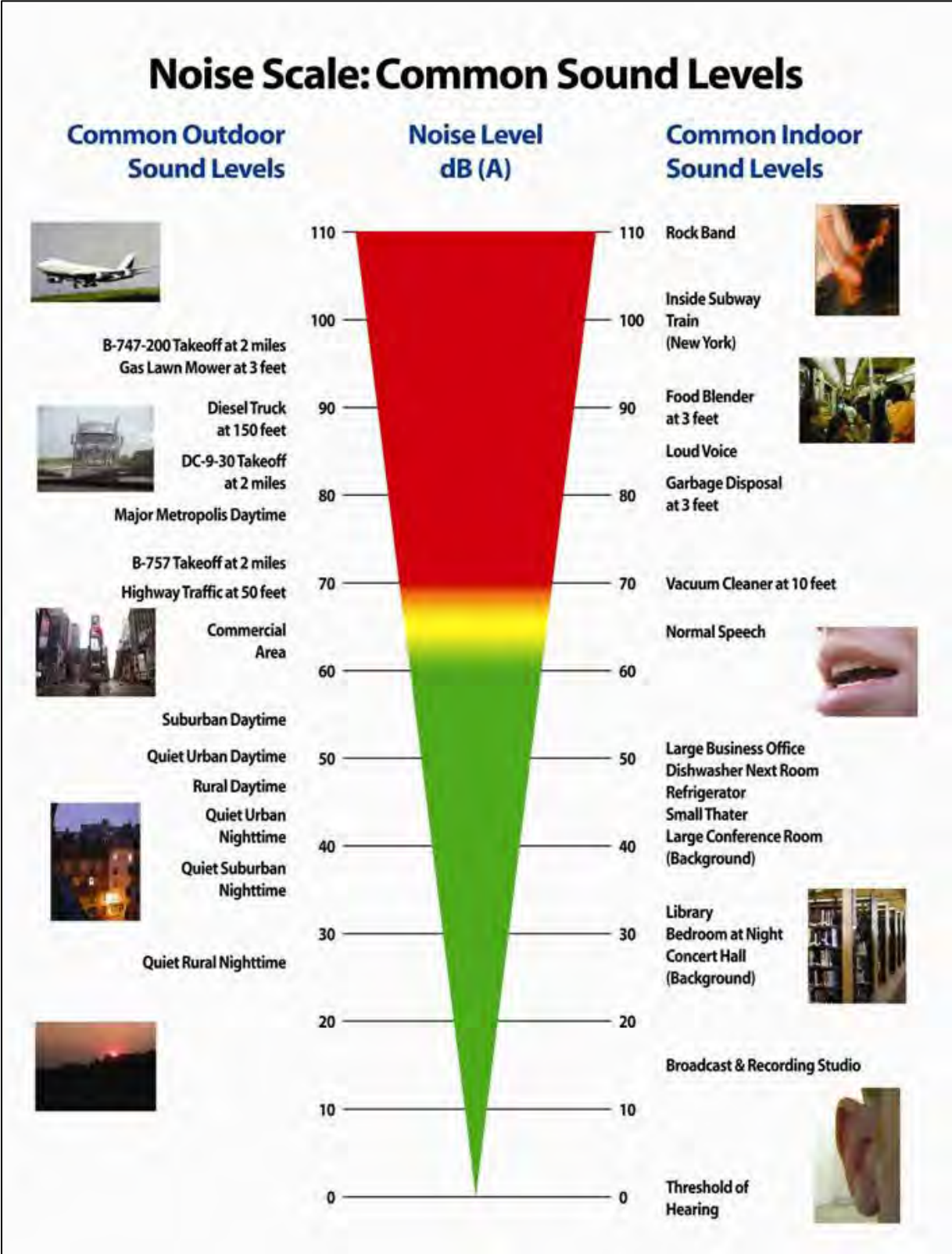
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**Figure 2
Common Sound Levels**

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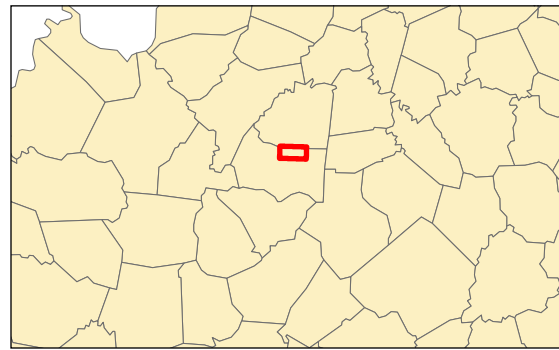
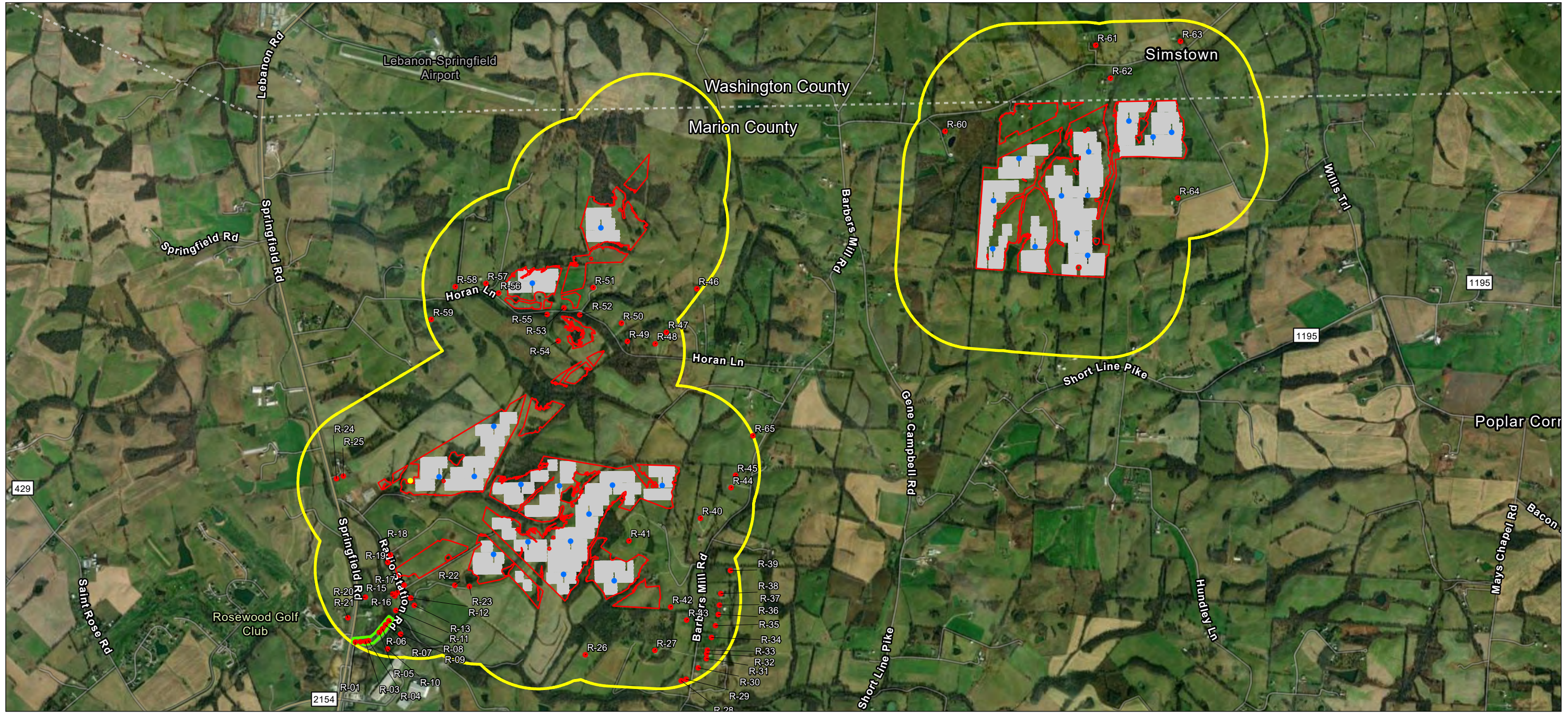
Figure 2. Common Sound Levels



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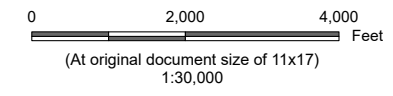
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**Figure 3
Noise Sensitive Receptor Locations**



- Legend**
- Project Study Area
 - 2000 ft Buffer
 - Residential Neighborhoods as per KRS 278.700
 - Panel Layout
 - Noise Sensitive Receptors
 - Inverter
 - Substation

Notes
 1. Coordinate System: NAD 1983 UTM Zone 16N
 2. Data Sources: ESRI, Stantec
 3. Background: Hybrid Reference Layer: City of Bardstown, Nelson County, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, MET/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS
 World Imagery: Maxar



Project Location: Marion County, KY
 Client/Project: Northern Bobwhite Solar Facility
 Prepared by GRG on 2024-02-29
 TR by ALC on 2024-03-01
 IR by JP on 2024-03-01

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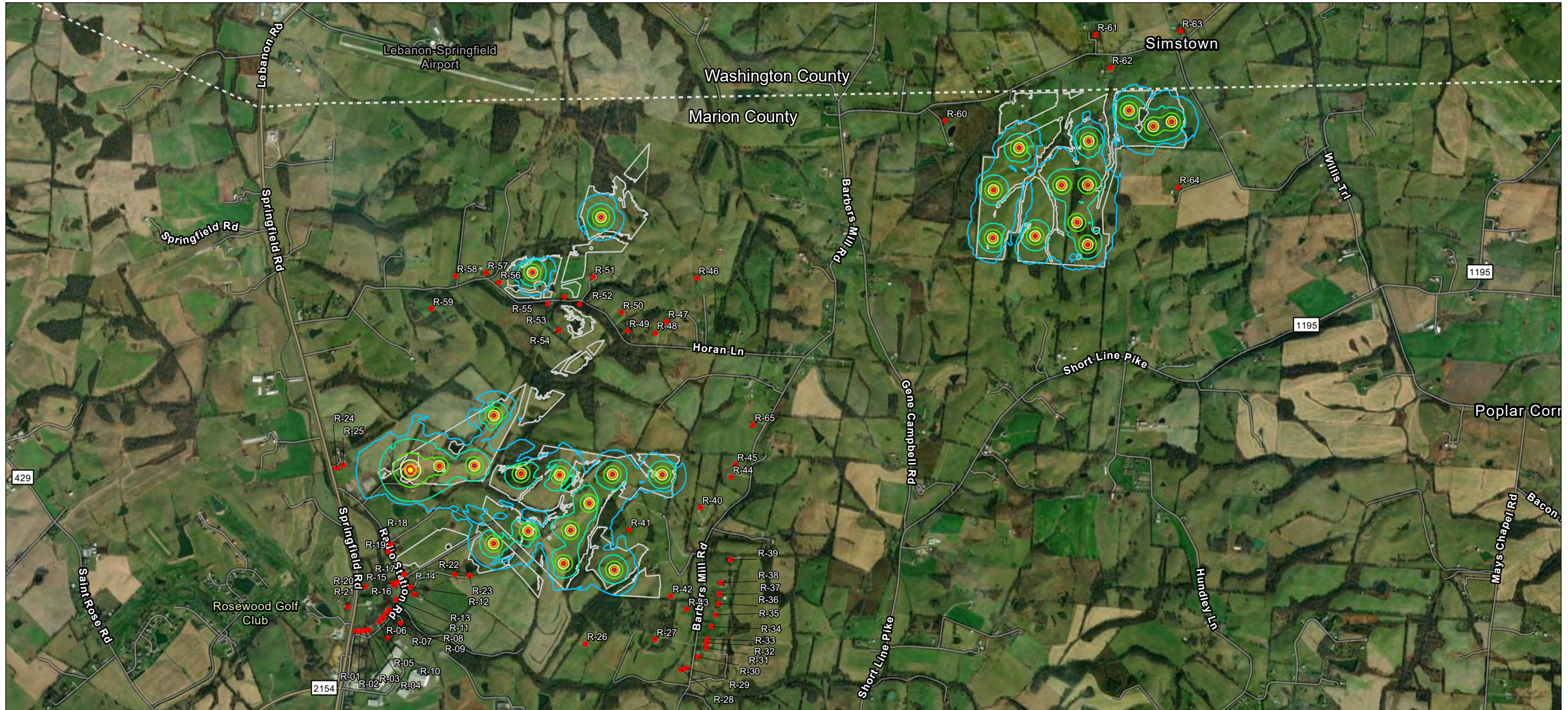
Figure No.
3

Title
Project Site Layout

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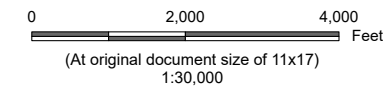
**Figure 4
Operational Sound Modeling Results**



Notes
 1. Coordinate System: NAD 1983 UTM Zone 16N
 2. Data Sources: ESRI, Stantec
 3. Background: Hybrid Reference Layer: City of Bardstown, Nelson County, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS
 World Navigation Map: City of Bardstown, Nelson County, Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, NPS, USFWS
 World Imagery: Maxar

Legend

- Project Study Area
 - Inverter
 - Substation
 - Noise Sensitive Receptors
- Sound Level Contour (dBA)**
- 35
 - 40
 - 45
 - 50
 - 55
 - 60



Project Location: Marion County, KY
 Client/Project: Northern Bobwhite Solar Facility
 Prepared by GRG on 2024-02-29
 TR by ALC on 2024-03-01
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Figure No.

4

Title

Daytime Operational Noise Results

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Appendix A

Receptor Locations (UTM 16 Coordinates) and Operational Sound Model Results

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Table A.1. Receptor Locations and Operational Sound Model Results

Receptor ID	Sound Level (dBA Leq)	Distance to inverter (ft)	Distance to substation (ft)	Distance to panel tracking system (ft)	Distance to fence (ft)	X, UTM 16 (m)	Y, UTM 16 (m)	Z (m)
R-01	21	4078	4246	3397	1945	654514.2	4162317	257.65
R-02	22	3967	4200	3283	1871	654553.3	4162319	258.17
R-03	22	3863	4160	3177	1808	654590.1	4162320	255.16
R-04	22	3787	4119	3100	1754	654613.5	4162327	252.6
R-05	22	3446	3854	2760	1457	654696.1	4162391	241.5
R-06	23	3333	3754	2648	1351	654719.9	4162417	242.32
R-07	24	3215	3642	2532	1233	654743	4162448	241.63
R-08	24	3090	3530	2410	1116	654768.6	4162478	238.24
R-09	24	3052	3827	2354	1420	654857.5	4162377	252.35
R-10	22	3538	4226	2839	1809	654759	4162265	254.07
R-11	25	2807	3249	2137	832	654821.4	4162557	237.5
R-12	26	2331	2919	1672	532	654935.3	4162652	239.75
R-13	26	2349	3106	1670	686	654961.7	4162595	239.47
R-14	26	2354	2605	1749	234	654885.3	4162749	239.38
R-15	25	2698	2855	2072	446	654798.4	4162682	237.5
R-16	25	2669	2895	2035	479	654814	4162667	237.5
R-17	26	2581	2808	1955	390	654832.9	4162691	237.82
R-18	28	2290	1911	1727	365	654780.8	4162979	240.84
R-19	28	2485	2110	1926	252	654761.3	4162922	239.71
R-20	25	3364	3107	2752	965	654591.2	4162658	258.48
R-21	26	3957	3750	3313	1619	654457.8	4162501	262.98
R-22	30	1236	2829	544	503	655269.5	4162748	251.5
R-23	31	999	3014	324	232	655380.3	4162740	254.97
R-24	28	2558	1842	1979	1046	654370.6	4163558	239.77
R-25	29	2385	1672	1808	883	654423.4	4163577	241
R-26	24	1980	6147	1578	1397	656260.5	4162220	249.83
R-27	23	2008	7411	1697	1047	656788.3	4162254	265.5
R-28	19	2998	8385	2693	1880	656988.7	4162023	247.83
R-29	19	3038	8463	2740	1886	657026.3	4162035	250.33
R-30	19	3014	8551	2688	1769	657117.7	4162121	254.79
R-31	20	3006	8602	2645	1715	657180.1	4162191	262.13
R-32	20	2934	8545	2563	1633	657181.5	4162228	263.5
R-33	20	2893	8515	2514	1586	657187	4162255	263.5
R-34	21	2806	8455	2396	1490	657218.7	4162352	263.5

NORTHERN BOBWHITE SOLAR PROJECT ACOUSTIC ASSESSMENT

March 1, 2024

Receptor ID	Sound Level (dBA Leq)	Distance to inverter (ft)	Distance to substation (ft)	Distance to panel tracking system (ft)	Distance to fence (ft)	X, UTM 16 (m)	Y, UTM 16 (m)	Z (m)
R-35	21	2760	8413	2325	1466	657248.8	4162441	265.18
R-36	21	2726	8362	2274	1481	657270.4	4162526	265.5
R-37	22	2690	8297	2228	1477	657278.9	4162598	267.01
R-38	22	2675	8227	2206	1507	657289.3	4162685	269.5
R-39	23	2715	8279	2300	1809	657362.3	4162860	275.5
R-40	29	1255	7284	860	734	657134.2	4163256	269.5
R-41	33	1059	5648	502	407	656592.1	4163085	283.5
R-42	25	1549	7204	1126	282	656908	4162583	270.25
R-43	21	2053	7706	1640	742	657029.7	4162484	255.24
R-44	23	1716	7989	1444	1353	657367.1	4163489	273.22
R-45	23	1844	8100	1527	1404	657401.3	4163583	276.01
R-46	19	2831	8588	2272	1893	657107.2	4164999	280.22
R-47	22	3070	7370	2561	1619	656875.7	4164669	283.5
R-48	21	3190	6987	2717	1285	656791.3	4164581	281.56
R-49	22	2776	6423	2186	628	656579.8	4164599	269.16
R-50	23	2429	6560	1830	693	656534.6	4164738	269.14
R-51	24	1500	6623	900	246	656320	4165008	260.18
R-52	26	1421	5904	844	166	656218.3	4164801	251.5
R-53	30	999	5762	459	213	656098.7	4164855	251.31
R-54	27	1577	5069	1229	246	656055.2	4164603	277.19
R-55	31	862	5363	564	157	655970.9	4164804	248.67
R-56	25	875	5164	262	216	655602.3	4164966	246.95
R-57	25	1155	5261	574	430	655506.1	4165039	245.7
R-58	22	1923	4958	1341	1195	655272.5	4165015	243.5
R-59	24	2674	4051	2052	1889	655090.9	4164767	257.5
R-60	26	1960	15908	1558	1313	658992	4166195	276.2
R-61	23	2060	20222	1519	1456	660135.9	4166848	257.5
R-62	27	1160	20111	621	615	660247.6	4166598	255.5
R-63	24	2277	22082	1492	1480	660779.4	4166878	250.94
R-64	29	1641	20368	1046	991	660759	4165688	275.5
R-65	20	2576	8604	2100	1999	657533	4163883	279.18

Appendix E

Traffic Impact Study



Northern Bobwhite Solar LLC Traffic Impact Study

February 29, 2024

Prepared for:

Northern Bobwhite Solar LLC

Prepared by:

Stantec Consulting Services Inc.
9200 Shelbyville Road, Suite 800
Louisville, Kentucky 40222




NORTHERN BOBWHITE SOLAR LLC TRAFFIC IMPACT STUDY


This document entitled Northern Bobwhite Solar LLC Traffic Impact Study was prepared by Stantec Consulting Services Inc. ("Stantec") for the account of Northern Bobwhite Solar LLC (the "Client"). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by 
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Dan O'Dea, Senior Transportation Engineer

Reviewed by 
(signature)

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Approved by 
(signature)

Brian Aldridge, Senior Principal



NORTHERN BOBWHITE SOLAR LLC TRAFFIC IMPACT STUDY

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NORTHERN BOBWHITE SOLAR LLC TRAFFIC IMPACT STUDY

Executive Summary

Northern Bobwhite Solar LLC is proposing to construct and operate the Northern Bobwhite Solar Project (Project) located northeast of Lebanon, Kentucky in northern Marion County with a small portion extending into Washington County. The petitioner proposes to establish a solar facility on the site. The development comprises multiple adjacent parcels sharing a contiguous border with access points into the facility from Horan Road, Radio Station Road, and KY 2758 (Simstown Road). Analyses of the 2023 existing conditions (based on most recent counts provided by the Kentucky Transportation Cabinet, KYTC) and the 2026 construction year were performed. The traffic impact study (TIS) evaluated the operating conditions for the AM and PM peak hours at the roadway segments below, listed by KYTC count station:

- Station 078786: KY 55 from MP 1.866 to MP 4.669
- Station 115547: KY 55 from MP 0.000 to MP 2.803
- Station 078A78: KY 2154 from MP 0.000 to 1.337
- Station 078024: KY 1404 (Barbers Mill Road) from MP 0.000 to MP 4.000
- Station 078022: KY 2758 (Simstown Road) from MP 0.000 to MP 0.826
- Station 115511: KY 2758 (Simstown Road) from MP 0.000 to MP 1.438
- Station 078019: KY 1195 (Shortline Pike) from MP 0.000 to MP 3.030
- Station 078017: KY 1195 (Shortline Pike) from MP 3.030 to MP 6.082
- Station 078023: Horan Road (CR 1038) from MP 1.777 to MP 1.977
- Station 078025: Radio Station Road (CR 1040) from MP 0.291 to MP 0.491
- Station 078021: Gene Campbell Road (CR 1035) from MP 0.000 to MP 0.0150

Based on the results of the analysis, the following conclusions were developed:

- During construction, all highway segments are anticipated to continue to operate at acceptable level of service (LOS) standards during the peak hours. Therefore, the construction for this Project will not adversely affect traffic operations on any of the roadways in and around the Project area.
- After construction is complete, the site will be managed with negligible added traffic demand. During the operational phase of the project, the surrounding roadway network will continue to operate at an acceptable LOS during the peak hours.



NORTHERN BOBWHITE SOLAR LLC TRAFFIC IMPACT STUDY

1.0 INTRODUCTION

The purpose of this study is to estimate the traffic impacts of the proposed Northern Bobwhite Solar Project (“Northern Bobwhite Solar” or the “Project”) which is located northeast of Lebanon, Kentucky in northern Marion County with a small portion extending into Washington County. The development comprises multiple adjacent parcels sharing a contiguous border. The Project site can be generally described as south of the Marion / Washington County line, east of KY 55, north of US 68 (Danville Highway), and west of KY 1195. The proposed Project site is shown in **Figure 1**.

The Project is a proposed 96-megawatt photovoltaic electrical generating facility which will be comprised of approximately 2,200 acres. The facility will consist of solar photovoltaic panels and their associated racking systems, inverters, collection system, transmission line, project substation and other project equipment. Arrays of photovoltaic modules will be mounted on single access trackers arranged in rows. Power conversion systems will be distributed throughout the Project area, comprised of inverters, substation, and utility switching station. The equipment will connect via underground electrical wiring to a substation and switchyard proposing to interconnect to the existing East Kentucky Power Cooperative (EKPC) 161-kilovolt transmission substation located on the southwest corner of the property (1004 Radio Station Road, Lebanon, KY). The Project will have three access points from Horan Road, Radio Station Road, and KY 2758 (Simstown Road) for construction vehicle deliveries. The construction year is assumed to be 2026.



NORTHERN BOBWHITE SOLAR LLC TRAFFIC IMPACT STUDY

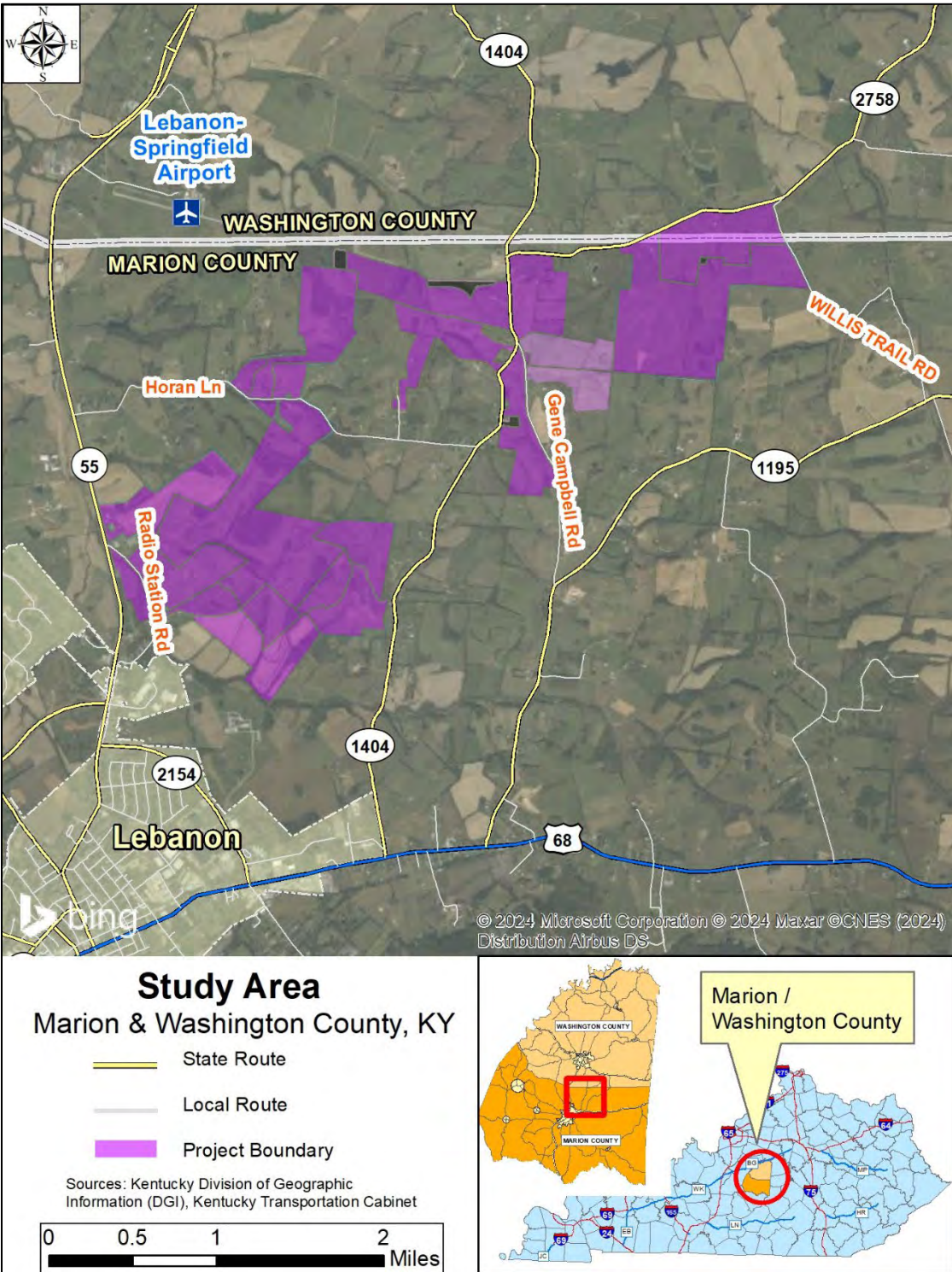


Figure 1: Project Location



NORTHERN BOBWHITE SOLAR LLC TRAFFIC IMPACT STUDY

2.0 DATA COLLECTION

Annual Average Daily Traffic (AADT) traffic counts were obtained from the Kentucky Transportation Cabinet (KYTC) to establish the existing traffic conditions. **Figure 2** shows the locations of the primary / adjacent count stations used in this analysis. The summarized count data for each of these stations (plus additional stations outside the immediate area) is included in **Appendix A** for the following count stations:

- Station 078786: KY 55 from MP 1.866 to MP 4.669
- Station 115547: KY 55 from MP 0.000 to MP 2.803
- Station 078A78: KY 2154 from MP 0.000 to 1.337
- Station 078024: KY 1404 (Barbers Mill Road) from MP 0.000 to MP 4.000
- Station 078022: KY 2758 (Simstown Road) from MP 0.000 to MP 0.826
- Station 115511: KY 2758 (Simstown Road) from MP 0.000 to MP 1.438
- Station 078019: KY 1195 (Shortline Pike) from MP 0.000 to MP 3.030
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- Station 078023: Horan Road (CR 1038) from MP 1.777 to MP 1.977
- Station 078025: Radio Station Road (CR 1040) from MP 0.291 to MP 0.491
- Station 078021: Gene Campbell Road (CR 1035) from MP 0.000 to MP 0.0150

KY 55 is a two-lane rural principal arterial with a posted speed limit of 55 miles per hour (mph) and daily traffic of ranging between 9,600 VPD and 10,400 VPD. KY 2154 is a two-lane urban minor arterial with a daily traffic volume of 5,600 VPD and posted speed limit of 55 mph. KY 1404 (Barbers Mill Road) is rural minor collector with a daily traffic of 500 VPD and statutory speed limit of 55 mph. KY 1195 (Shortline Pike) is a rural minor collector with a daily traffic ranging between 300 VPD and 500 VPD and statutory speed limit of 55 mph. KY 2758 (Simstown Road) is a local road with an AADT of 100 VPD and statutory speed limit of 55 mph. Horan Road is a local road with daily traffic of 200 VPD and a statutory speed limit of 55 mph. Both Radio Station Road and Gene Campbell Road are classified as local roads with daily traffic of 100 VPD and statutory speed limits of 55 mph.



NORTHERN BOBWHITE SOLAR LLC TRAFFIC IMPACT STUDY

DATA COLLECTION

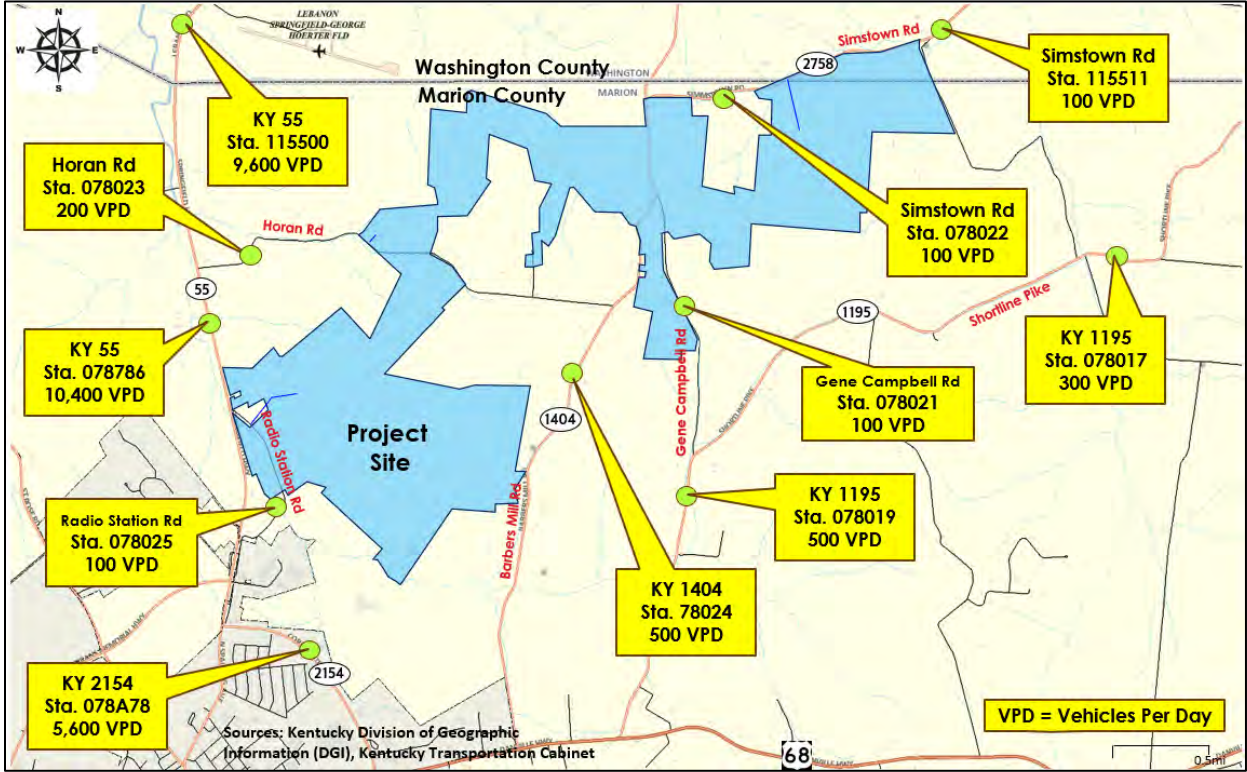


Figure 2: KYTC Count Station

Figure 3 summarizes historical volumes from the KYTC traffic count database, showing that daily traffic on KY 55 and KY 2154 has generally increased slightly over the past 15 years. All other routes within the study area for which historical counts are available show that traffic growth has been relatively flat over the past 20 years.



NORTHERN BOBWHITE SOLAR LLC TRAFFIC IMPACT STUDY

DATA COLLECTION

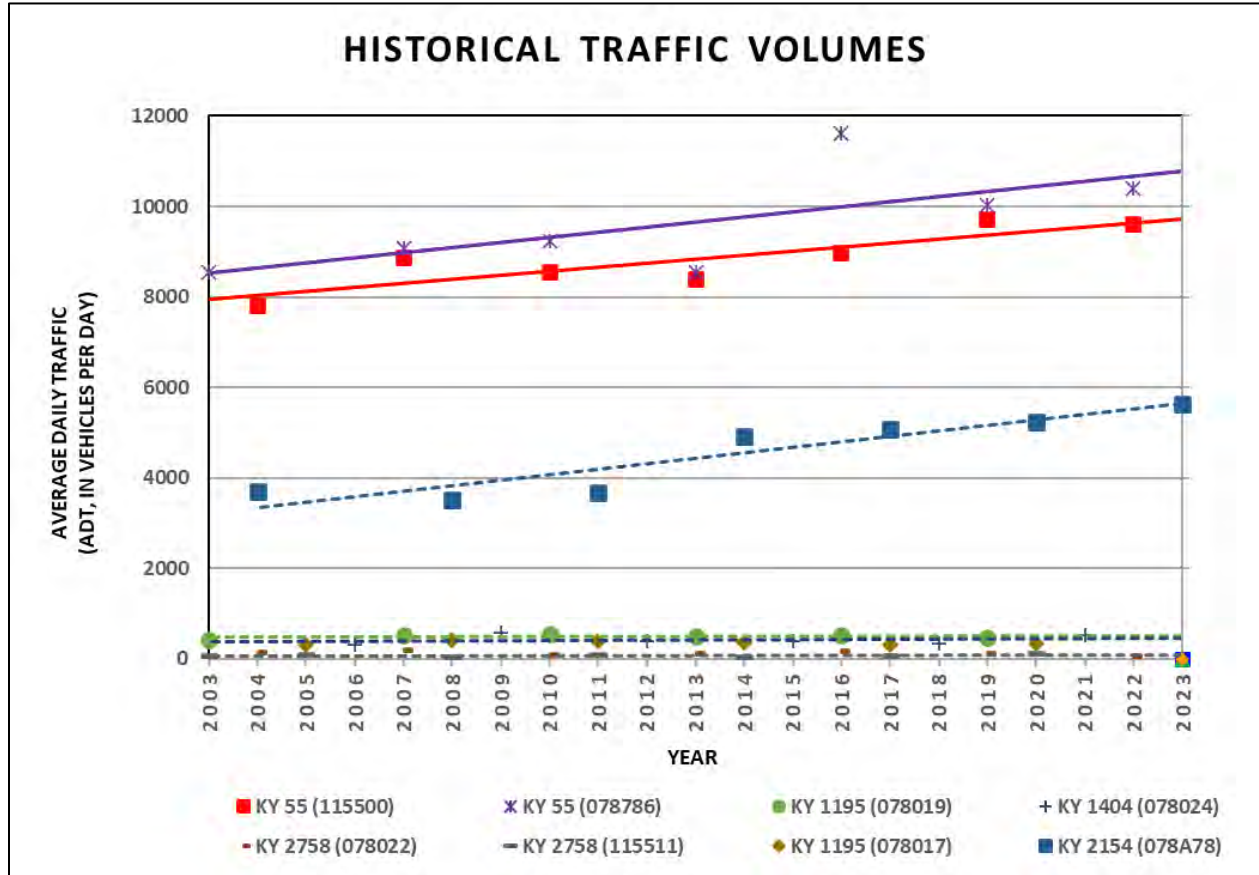


Figure 3: Historical Traffic Volumes

The parcels for the proposed solar farm are located primarily in northern Marion County and extend slightly into Washington County. The access road for northernmost parcel from Simstown Road is located near the Marion / Washington County line. Population estimates and projections for both Marion and Washington County are included in **Figure 4** and **Figure 5**, respectively. Marion County’s population has decreased slightly since 2010, and that general trend is expected through 2045. The anticipated population decrease represents a -0.048% annual decline between 2020 and 2045. Washington County population estimates have increased slightly since 2010 and is expected to see a projected annual growth rate of 0.127%. While the population of Washington County has increased, the southern part of the county in the vicinity of the Project has not developed to the same extent. Therefore, based on trends



NORTHERN BOBWHITE SOLAR LLC TRAFFIC IMPACT STUDY

DATA COLLECTION

from the historical volumes and negative growth for Marion County, a growth factor was not applied to the latest traffic count data to the construction year of 2026.

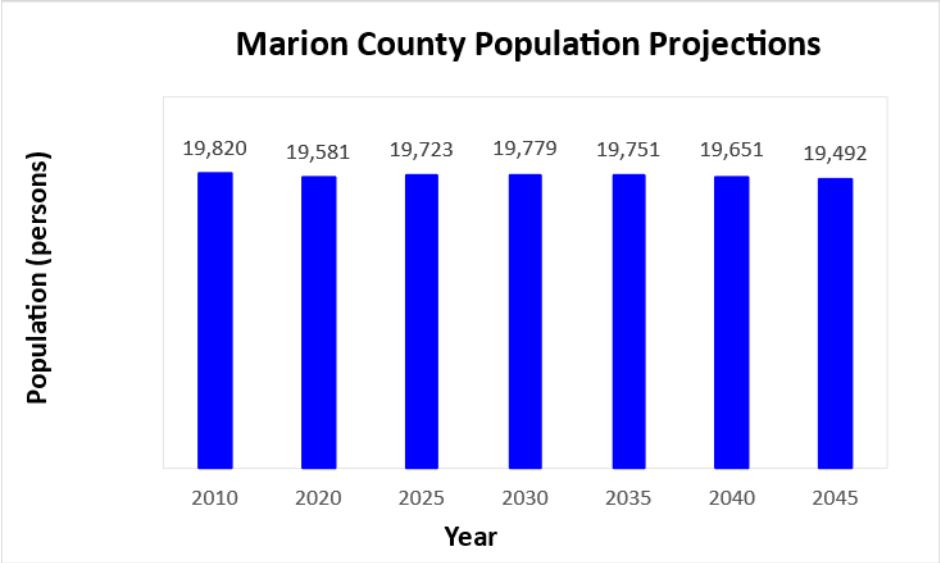


Figure 4: Marion County Population Estimates & Projections
(Source: Kentucky State Data Center, August 2022)

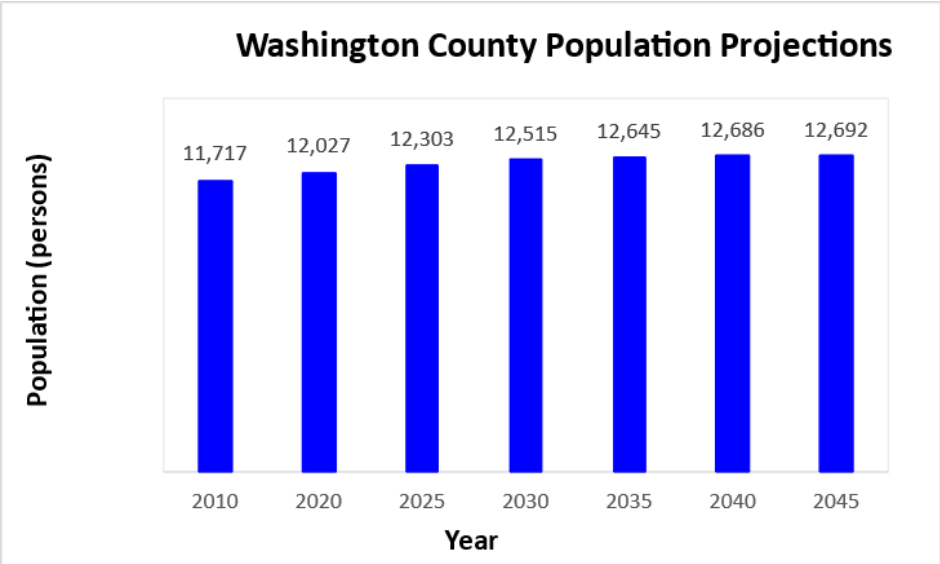


Figure 5: Washington County Population Estimates & Projections
(Source: Kentucky State Data Center, August 2022)



NORTHERN BOBWHITE SOLAR LLC TRAFFIC IMPACT STUDY

DATA COLLECTION

An evaluation was performed based on KYTC's AADT and the associated K factor (the proportion of AADT that occurs during the peak hour) for each count station. For county routes where the K factor was not available, 0.15 or 15% is assumed as K is generally higher in rural areas with low AADT. The data was used to calculate the design hourly volume (DHV), the 30th highest hourly traffic volume (in both directions) in the year in which data was collected, by vehicles per hour (VPH). For the purposes of this study, the design hourly volume is considered analogous to the peak hour volume for both directions of each two-way roadway.

The data was used to quantify the Level of Service (LOS) by roadway type and land use or context. LOS provides a measure of the quality of traffic flow provided by a roadway facility, expressed in terms of letter grades with LOS A representing the highest quality traffic flow and minimal delay, and LOS F representing poor traffic operations and significant delay. For rural areas, LOS C or better is generally considered to be acceptable. In urban areas, LOS D or better is generally considered acceptable. **Figure 6** provides an example of motorized vehicle LOS.

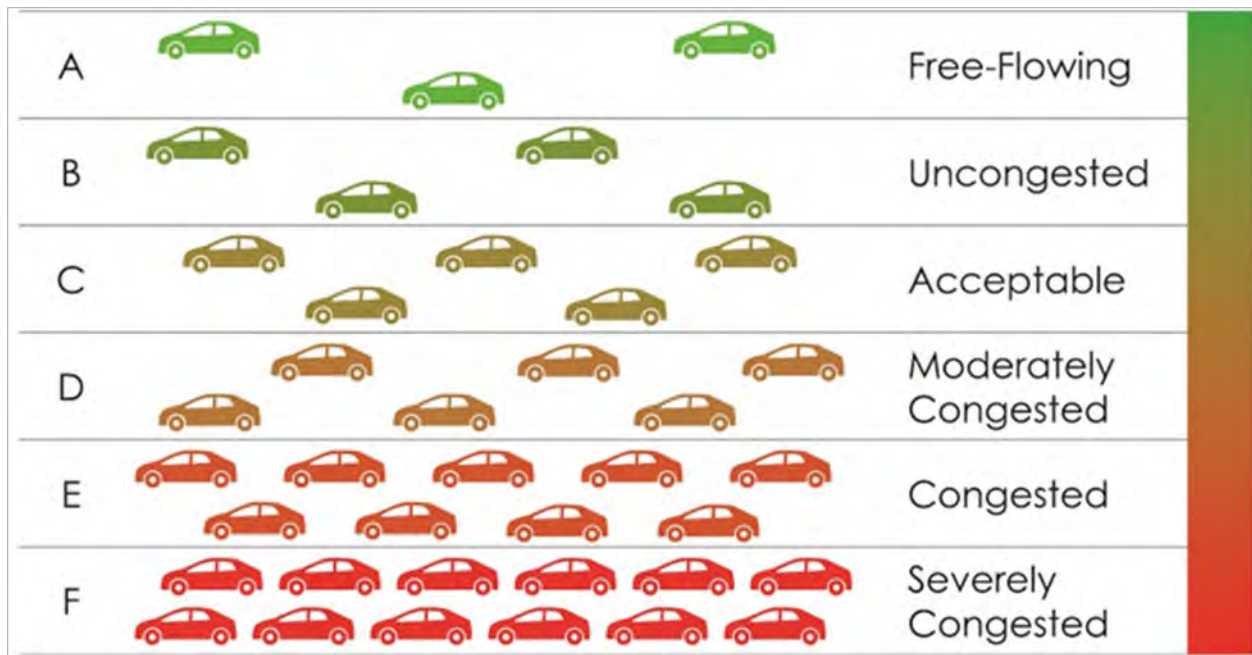


Figure 6: Examples of Motorized Vehicle LOS for Arterials

Motor Vehicle Highway Generalized Service Volume Tables (GSVT) were used to evaluate the roadways based on methods described in the *2023 Multimodal Quality/Level of Service Handbook (Q/LOS Handbook)* ([Link](#)). The handbook is intended to be used by engineers, planners, and decision-makers to



NORTHERN BOBWHITE SOLAR LLC TRAFFIC IMPACT STUDY

DATA COLLECTION

evaluate roadway users' quality/level of service (Q/LOS) at generalized planning levels. The Generalized Service Volume Tables are the primary tools for conducting generalized planning and are based on the Highway Capacity Manual (HCM) Sixth Edition and roadway, traffic, control characteristics and multimodal data.

For all two-lane roadways, the *Motor Vehicle Highway Generalized Service Volume Table* using Peak Hour Two-Way volumes for rural roadways was used for this evaluation and is shown in **Table 1**. Each GSVT provides generalized peak hour directional, peak hour two-way, and annual average daily traffic (AADT) maximum service volumes for a given LOS by roadway type and land use or context classification. Rural freeways and roadways are in areas with a population less than 5,000 and not immediately adjacent to core urbanized, urbanized, or transitioning areas. "Rural" refers to sparsely settled lands that may include agricultural land mixed with grassland, woodland, or wetlands.

Table 1: Generalized Service Volume Table using Peak Hour Two-Way Volumes for Rural Roadways

Roadway Type	Level of Service (LOS)			
	B	C	D	E
Two-Lane	440	780	1,330	2,710
Four-Lane	3,040	4,800	5,290	6,070
Six-Lane	4,560	6,490	7,950	9,110

Source: 2023 Multimodal Quality/Level of Service Handbook, Appendix B

The results of the existing peak hour traffic analyses for two-lane rural roadways are summarized in **Table 2**. The results indicate that all existing roadways in the vicinity of the Project currently operate at acceptable LOS during the peak hour.



NORTHERN BOBWHITE SOLAR LLC TRAFFIC IMPACT STUDY

PROJECT TRIP GENERATION

Table 2: Existing Peak Hour Two-Lane Highway Analysis

Route	Roadway Name	Segment Description	AADT (VPD)	K Factor	Peak Hr. (VPH)	LOS
KY 55	Springfield Hwy	KY 2154 to Marion / Washington Co. Line	10,400	9.8%	1,019	C
		Marion / Washington Co. Line to KY 150X	9,600	9.1%	874	C
KY 2154	Corporate Drive	KY 55 to US 68	5,600	10.1%	566	B
KY 1404	Barbers Mill Road	US 68 to Marion / Washington Co. Line	500	14.6%	73	A
KY 2758	Simstown Road	KY 1404 to Marion / Washington Co. Line	100	13.7%	14	A
		Marion / Washington Co. Line to KY 150	100	13.4%	13	A
KY 1195	Shortline Pike	US 68 to MP 3.030 (Hundley Lane)	500	9.9%	50	A
		MP 3.030 to Marion / Washington Co. Line	300	13.7%	41	A
CR 1038	Horan Road	KY 55 to KY 1404	200	15%	30	A
CR 1040	Radio Station Rd.	KY 55 to Old Springfield Road.	100	15%	15	A
CR 1035	Gene Campbell Rd.	KY 1195 to KY 1404	100	15%	15	A

Specifically, the results indicate that both stations of KY 55 have peak hour volumes greater than 780 but less than 1,300 and, therefore, operate at a LOC C. The results indicate that the station for KY 2154 has a peak hour volume greater than 440 but less than 780 and, therefore, operates at a LOS of B. All other existing two-lane roadways in the vicinity of the Project have peak hour volumes below, and in most cases far below, 440 vehicles per hour and, therefore, operate at LOS A. Note that the peak hour volumes which are less than the threshold volume for LOS B would be LOS A.

3.0 PROJECT TRIP GENERATION

3.1 CONSTRUCTION

The trip generation analysis for the construction of the Project would generally be based on the number of workers and the associated construction and delivery truck trips expected during the construction of the Project. Construction workers will consist of laborers, equipment operators, electricians, supervisory personnel, support personnel, and construction management personnel. It is envisioned that workers will arrive/depart from passenger vehicles and trucks daily during the AM (6:00 – 9:00 AM) and PM (3:00 – 7:00 PM) peak hours. Equipment deliveries will occur on trailers, flatbeds, or other large vehicles at various times during the day. While specific details concerning construction duration and intensity are not currently known, this study has employed a sensitivity analysis to demonstrate likely construction traffic levels will not have a significant, adverse effect on peak hour traffic operations. For this analysis, all



NORTHERN BOBWHITE SOLAR LLC TRAFFIC IMPACT STUDY

PROJECT TRIP GENERATION

existing peak hour traffic volumes on roadways were increased by 5 percent which is greater than would be anticipated for the actual construction of the Project.

3.1.1 CONSTRUCTION ANALYSIS

The 2026 construction year analysis assumed no changes to the existing roadway network and increases in traffic as discussed above. The results of the construction year peak hour two-lane analysis are summarized in **Table 3**. The results indicate that all analyzed roadway segments are anticipated to continue to operate at an acceptable LOS during construction for both peak hours as there are no changes from the analysis for the existing scenario.

Table 3: Construction Year (2026) Peak Two-Lane Highway Analysis

Route	Roadway Name	Segment Description	AADT (VPD)	K Factor	Peak Hr. (VPH)	LOS
KY 55	Springfield Hwy	KY 2154 to Marion / Washington Co. Line	10,920	9.8%	1,070	C
		Marion / Washington Co. Line to KY 150X	10,080	9.1%	917	C
KY 2154	Corporate Drive	KY 55 to US 68	5,880	10.1%	594	B
KY 1404	Barbers Mill Road	US 68 to Marion / Washington Co. Line	525	14.6%	77	A
KY 2758	Simstown Road	KY 1404 to Marion / Washington Co. Line	105	13.7%	14	A
		Marion / Washington Co. Line to KY 150	105	13.4%	14	A
KY 1195	Shortline Pike	US 68 to MP 3.030 (Hundley Lane)	525	9.9%	52	A
		MP 3.03 to Marion / Washington Co. Line	315	13.7%	43	A
CR 1038	Horan Road	KY 55 to KY 1404	210	15%	32	A
CR 1040	Radio Station Rd.	KY 55 to Old Springfield Road.	105	15%	16	A
CR 1035	Gene Campbell Rd.	KY 1195 to KY 1404	105	15%	16	A

3.1.2 TRUCK WEIGHT LIMITS

Kentucky Revised Statute (KRS) 189.222 requires weight limits on the state-maintained highway system. KY 55 and KY 2154 are classified as AAA highways so a truck, semitrailer, truck / trailer unit (including load) can haul a gross weight up to 80,000 lbs. KY 1404, KY 1195, and KY 2758 are classified as A Highways indicating trucks can haul a gross weight up to 44,000 lbs. The gross truck weight limit for Horan Road, Radio Station Road, and Gene Campbell Road is up to 36,000 lbs.

There is a bridge over Casey Branch on Horan Lane at MP 1.9 with a posted weight limit of 13 Tons (26,000 lbs). All trucks must conform to the posted bridge weight limit on this or any other bridge on its



NORTHERN BOBWHITE SOLAR LLC TRAFFIC IMPACT STUDY

CONCLUSION

route to the Project. No other bridges with posted weight limits were identified on routes in the immediate vicinity of the study area.

3.2 OPERATION

Once operational, the facility will be managed and monitored by a small number of employees. The facility will have up to three full-time employees on site for 40 hours per week for site inspections and repair. Operations workers are expected to commute to and from the Project site individually during the peak AM and PM hours. Work can also be conducted at night, but this is anticipated to be minimal. This additional volume of daily traffic is considered negligible, and the operational phase of the project will have no measurable impact on the traffic and/or transportation infrastructure.

4.0 CONCLUSION

As demonstrated in the traffic analysis, the construction period will not produce significant operational changes to existing roadways. All roadways within the Project area will continue to operate at an acceptable LOS (likely LOS B or better) during peak construction traffic. Although no significant adverse traffic impacts are expected during Project construction or operation, using mitigation measures such as ridesharing between construction workers, using appropriate traffic controls, or allowing flexible working hours outside of peak hours could be implemented to minimize any potential for delays during the AM and PM peak hours.



NORTHERN BOBWHITE SOLAR LLC TRAFFIC IMPACT STUDY

Appendix A

Appendix A

HISTORICAL TRAFFIC COUNT DATA



Historical Traffic Volume Summary

Station Details:

Sta ID:	078786
Sta Type:	Full Coverage
Map:	MapIt
District:	4
County:	Marion
Route:	078-KY-0055 -000
Route Desc:	SPRINGFIELD HWY

Begin MP:	1.8660
Begin Desc:	KY 2154
End Mp:	4.6690
End Desc:	WASHINGTON COUNTY LINE
Impact Year:	
Year Added:	

Newest Count:

AADT:	10391
Year:	2022
% Single:	6.9590
% Combo:	4.5140
K Factor:	9.80
D Factor:	58

Definitions:

Sta. ID - Three digit county number + station number

MP - milepoint

Impact Year – year of significant change to traffic pattern within station segment

AADT – Annual Average Daily Traffic – the annualized average 24-hour volume of vehicles on a segment of roadway

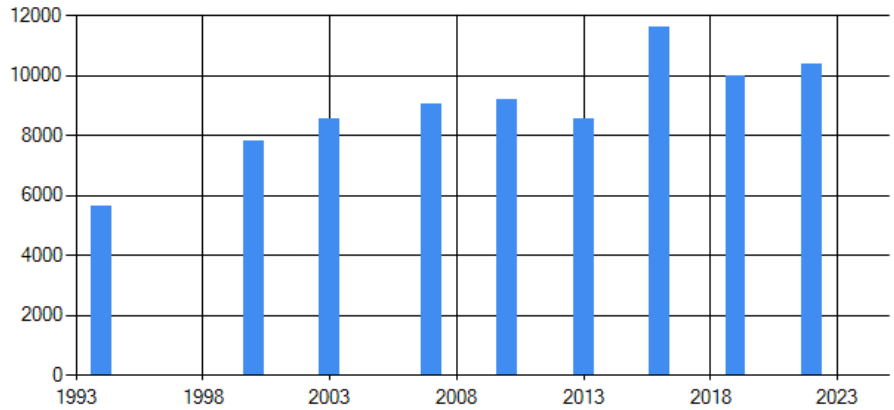
% Single – single unit truck volume as a percentage of the AADT

% Combo – combination truck volume as a percentage of the AADT

K Factor – peak hour volume as a percentage of the AADT

D Factor – percentage of peak hour volume flowing in the peak direction

Year	AADT	Year	AADT	Year	AADT
2024		2014		2004	
2023		2013	8548	2003	8550
2022	10391	2012		2002	
2021		2011		2001	
2020		2010	9220	2000	7810
2019	10015	2009		1999	
2018		2008		1998	
2017		2007	9070	1997	
2016	11617	2006		1996	
2015		2005		1995	



Historical Traffic Volume Summary

Station Details:

Sta ID:	115500
Sta Type:	Classification
Map:	MapIt
District:	4
County:	Washington
Route:	115-KY-0055 -000
Route Desc:	LEBANON RD

Begin MP:	0
Begin Desc:	MARION COUNTY LINE
End Mp:	2.8030
End Desc:	KY 528 & KY 3164
Impact Year:	
Year Added:	

Newest Count:

AADT:	9598
Year:	2022
% Single:	8.7470
% Combo:	13.5920
K Factor:	9.10
D Factor:	52

Definitions:

Sta. ID - Three digit county number + station number

MP - milepoint

Impact Year – year of significant change to traffic pattern within station segment

AADT – Annual Average Daily Traffic – the annualized average 24-hour volume of vehicles on a segment of roadway

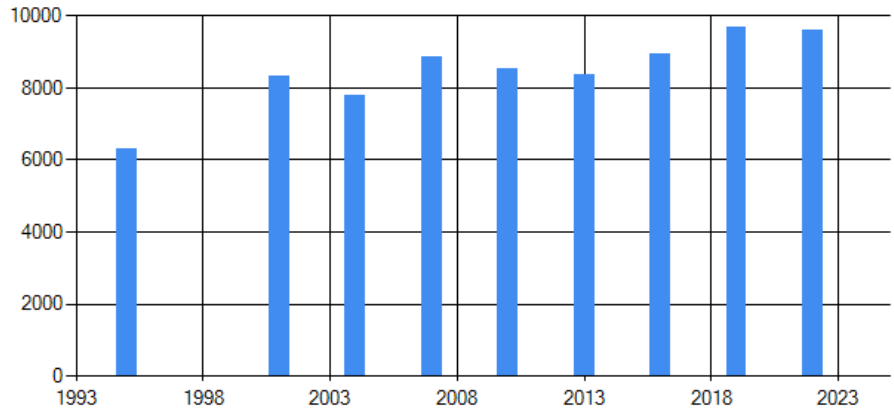
% Single – single unit truck volume as a percentage of the AADT

% Combo – combination truck volume as a percentage of the AADT

K Factor – peak hour volume as a percentage of the AADT

D Factor – percentage of peak hour volume flowing in the peak direction

Year	AADT	Year	AADT	Year	AADT
2024		2014		2004	7810
2023		2013	8381	2003	
2022	9598	2012		2002	
2021		2011		2001	8310
2020		2010	8550	2000	
2019	9698	2009		1999	
2018		2008		1998	
2017		2007	8870	1997	
2016	8961	2006		1996	
2015		2005		1995	6300



Historical Traffic Volume Summary

Station Details:

Sta ID:	078019
Sta Type:	Full Coverage
Map:	MapIt
District:	4
County:	Marion
Route:	078-KY-1195 -000
Route Desc:	SHORTLINE PIKE

Begin MP:	0
Begin Desc:	US 68
End Mp:	3.03
End Desc:	HUNDLEY LANE
Impact Year:	
Year Added:	

Newest Count:

AADT:	467
Year:	2019
% Single:	
% Combo:	
K Factor:	9.90
D Factor:	58

Definitions:

Sta. ID - Three digit county number + station number

MP - milepoint

Impact Year – year of significant change to traffic pattern within station segment

AADT – Annual Average Daily Traffic – the annualized average 24-hour volume of vehicles on a segment of roadway

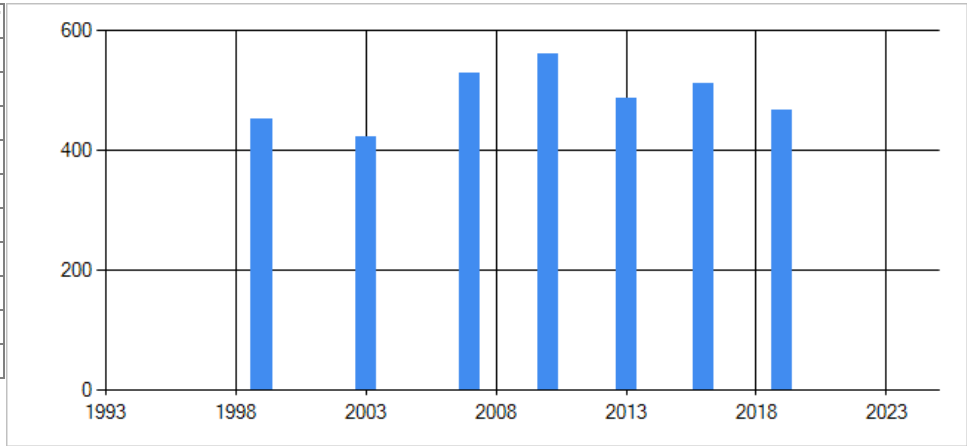
% Single – single unit truck volume as a percentage of the AADT

% Combo – combination truck volume as a percentage of the AADT

K Factor – peak hour volume as a percentage of the AADT

D Factor – percentage of peak hour volume flowing in the peak direction

Year	AADT	Year	AADT	Year	AADT
2024		2014		2004	
2023		2013	487	2003	424
2022		2012		2002	
2021		2011		2001	
2020		2010	562	2000	
2019	467	2009		1999	452
2018		2008		1998	
2017		2007	529	1997	
2016	512	2006		1996	
2015		2005		1995	



Historical Traffic Volume Summary

Station Details:

Sta ID:	078017
Sta Type:	Full Coverage
Map:	MapIt
District:	4
County:	Marion
Route:	078-KY-1195 -000
Route Desc:	SHORTLINE PIKE

Begin MP:	3.03
Begin Desc:	HUNDLEY LANE
End Mp:	6.0820
End Desc:	WASHINGTON COUNTY LINE
Impact Year:	
Year Added:	

Newest Count:

AADT:	329
Year:	2020
% Single:	
% Combo:	
K Factor:	13.70
D Factor:	56

Definitions:

Sta. ID - Three digit county number + station number

MP - milepoint

Impact Year – year of significant change to traffic pattern within station segment

AADT – Annual Average Daily Traffic – the annualized average 24-hour volume of vehicles on a segment of roadway

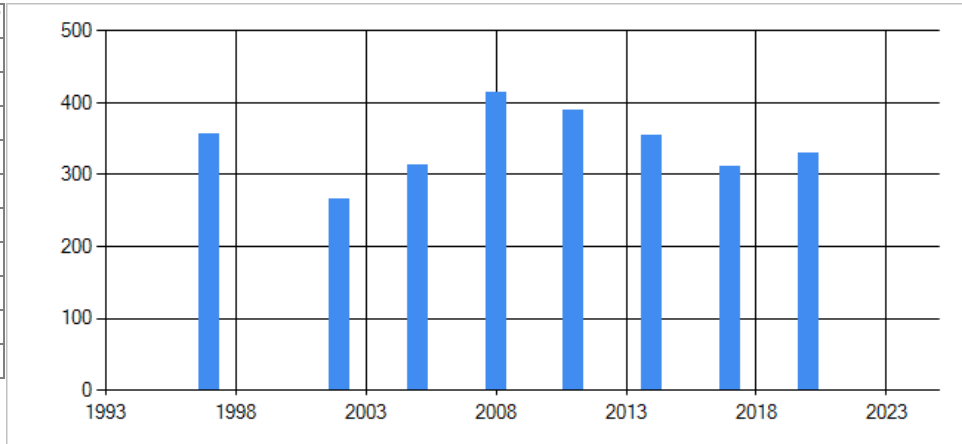
% Single – single unit truck volume as a percentage of the AADT

% Combo – combination truck volume as a percentage of the AADT

K Factor – peak hour volume as a percentage of the AADT

D Factor – percentage of peak hour volume flowing in the peak direction

Year	AADT	Year	AADT	Year	AADT
2024		2014	354	2004	
2023		2013		2003	
2022		2012		2002	265
2021		2011	389	2001	
2020	329	2010		2000	
2019		2009		1999	
2018		2008	414	1998	
2017	312	2007		1997	357
2016		2006		1996	
2015		2005	314	1995	



Historical Traffic Volume Summary

Station Details:

Sta ID:	078024
Sta Type:	Full Coverage
Map:	MapIt
District:	4
County:	Marion
Route:	078-KY-1404 -000
Route Desc:	BARBERS MILL RD

Begin MP:	0
Begin Desc:	US 68
End Mp:	4
End Desc:	WASHINGTON COUNTY LINE
Impact Year:	
Year Added:	

Newest Count:

AADT:	527
Year:	2021
% Single:	
% Combo:	
K Factor:	14.60
D Factor:	57

Definitions:

Sta. ID - Three digit county number + station number

MP - milepoint

Impact Year – year of significant change to traffic pattern within station segment

AADT – Annual Average Daily Traffic – the annualized average 24-hour volume of vehicles on a segment of roadway

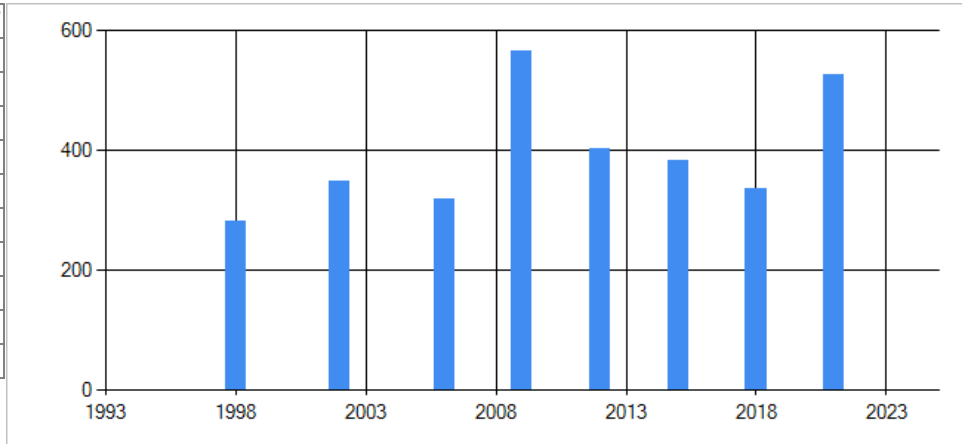
% Single – single unit truck volume as a percentage of the AADT

% Combo – combination truck volume as a percentage of the AADT

K Factor – peak hour volume as a percentage of the AADT

D Factor – percentage of peak hour volume flowing in the peak direction

Year	AADT	Year	AADT	Year	AADT
2024		2014		2004	
2023		2013		2003	
2022		2012	403	2002	349
2021	527	2011		2001	
2020		2010		2000	
2019		2009	566	1999	
2018	337	2008		1998	283
2017		2007		1997	
2016		2006	318	1996	
2015	384	2005		1995	



Historical Traffic Volume Summary

Station Details:

Sta ID:	078A78
Sta Type:	Classification
Map:	MapIt
District:	4
County:	Marion
Route:	078-KY-2154 -000
Route Desc:	CORPORATE DR

Begin MP:	0
Begin Desc:	US 68 (SULPHUR SPRINGS ROAD)
End Mp:	1.3370
End Desc:	KY 55 JUNCTION
Impact Year:	
Year Added:	

Newest Count:

AADT:	5620
Year:	2022
% Single:	10.4350
% Combo:	9.2720
K Factor:	10.10
D Factor:	65

Definitions:

Sta. ID - Three digit county number + station number

MP - milepoint

Impact Year – year of significant change to traffic pattern within station segment

AADT – Annual Average Daily Traffic – the annualized average 24-hour volume of vehicles on a segment of roadway

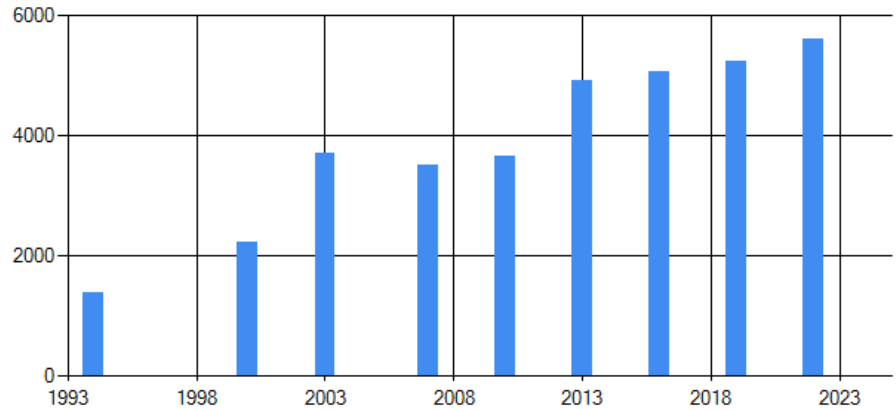
% Single – single unit truck volume as a percentage of the AADT

% Combo – combination truck volume as a percentage of the AADT

K Factor – peak hour volume as a percentage of the AADT

D Factor – percentage of peak hour volume flowing in the peak direction

Year	AADT	Year	AADT	Year	AADT
2024		2014		2004	
2023		2013	4915	2003	3710
2022	5620	2012		2002	
2021		2011		2001	
2020		2010	3670	2000	2240
2019	5233	2009		1999	
2018		2008		1998	
2017		2007	3520	1997	
2016	5078	2006		1996	
2015		2005		1995	



Historical Traffic Volume Summary

Station Details:

Sta ID:	078022
Sta Type:	Full Coverage
Map:	MapIt
District:	4
County:	Marion
Route:	078-KY-2758 -000
Route Desc:	SIMMSTOWN RD

Begin MP:	0
Begin Desc:	KY 1404
End Mp:	0.8260
End Desc:	WASHINGTON COUNTY LINE
Impact Year:	
Year Added:	

Newest Count:

AADT:	73
Year:	2022
% Single:	
% Combo:	
K Factor:	13.70
D Factor:	58

Definitions:

Sta. ID - Three digit county number + station number

MP - milepoint

Impact Year – year of significant change to traffic pattern within station segment

AADT – Annual Average Daily Traffic – the annualized average 24-hour volume of vehicles on a segment of roadway

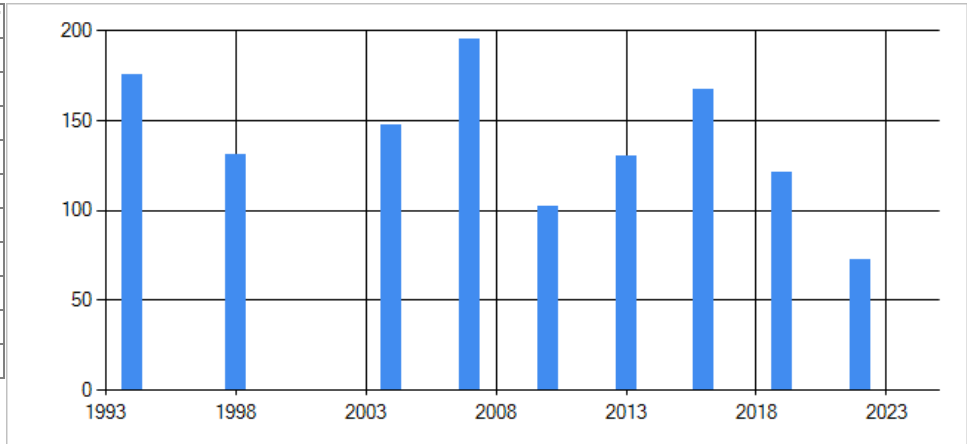
% Single – single unit truck volume as a percentage of the AADT

% Combo – combination truck volume as a percentage of the AADT

K Factor – peak hour volume as a percentage of the AADT

D Factor – percentage of peak hour volume flowing in the peak direction

Year	AADT	Year	AADT	Year	AADT
2024		2014		2004	148
2023		2013	130	2003	
2022	73	2012		2002	
2021		2011		2001	
2020		2010	102	2000	
2019	121	2009		1999	
2018		2008		1998	131
2017		2007	195	1997	
2016	167	2006		1996	
2015		2005		1995	



Historical Traffic Volume Summary

Station Details:

Sta ID:	115511
Sta Type:	Full Coverage
Map:	MapIt
District:	4
County:	Washington
Route:	115-KY-2758 -000
Route Desc:	SIMSTOWN RD

Begin MP:	0
Begin Desc:	MARION COUNTY LINE
End Mp:	1.4380
End Desc:	FROMAN ROAD
Impact Year:	
Year Added:	

Newest Count:

AADT:	119
Year:	2020
% Single:	
% Combo:	
K Factor:	13.40
D Factor:	56

Definitions:

Sta. ID - Three digit county number + station number

MP - milepoint

Impact Year – year of significant change to traffic pattern within station segment

AADT – Annual Average Daily Traffic – the annualized average 24-hour volume of vehicles on a segment of roadway

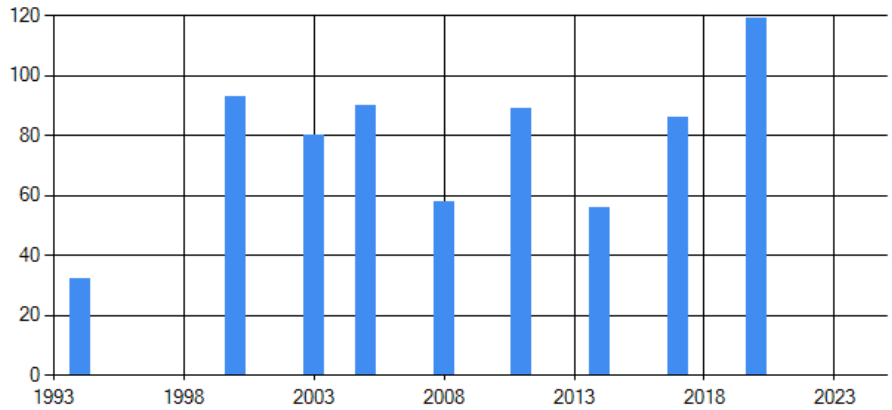
% Single – single unit truck volume as a percentage of the AADT

% Combo – combination truck volume as a percentage of the AADT

K Factor – peak hour volume as a percentage of the AADT

D Factor – percentage of peak hour volume flowing in the peak direction

Year	AADT	Year	AADT	Year	AADT
2024		2014	56	2004	
2023		2013		2003	80
2022		2012		2002	
2021		2011	89	2001	
2020	119	2010		2000	93
2019		2009		1999	
2018		2008	58	1998	
2017	86	2007		1997	
2016		2006		1996	
2015		2005	90	1995	



Historical Traffic Volume Summary

Station Details:

Sta ID:	078025
Sta Type:	Local Road Bridge
Map:	MapIt
District:	4
County:	Marion
Route:	078-CR-1040 -000
Route Desc:	RADIO STATION RD

Begin MP:	0.2910
Begin Desc:	
End Mp:	0.4910
End Desc:	
Impact Year:	
Year Added:	

Newest Count:

AADT:	138
Year:	2009
% Single:	
% Combo:	
K Factor:	
D Factor:	

Definitions:

Sta. ID - Three digit county number + station number

MP - milepoint

Impact Year – year of significant change to traffic pattern within station segment

AADT – Annual Average Daily Traffic – the annualized average 24-hour volume of vehicles on a segment of roadway

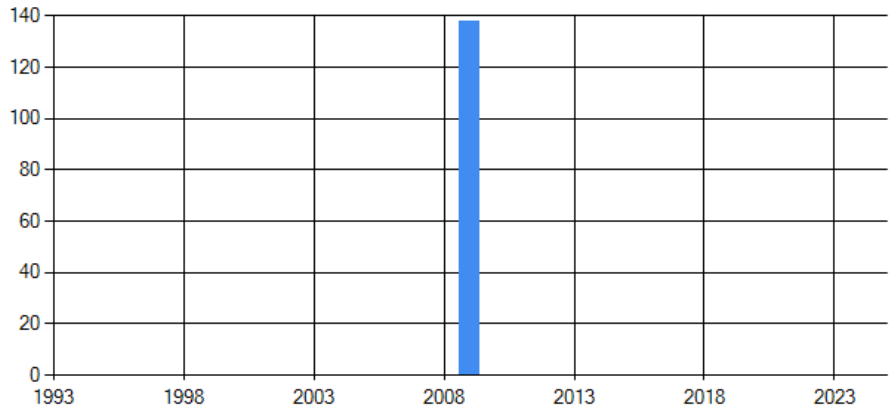
% Single – single unit truck volume as a percentage of the AADT

% Combo – combination truck volume as a percentage of the AADT

K Factor – peak hour volume as a percentage of the AADT

D Factor – percentage of peak hour volume flowing in the peak direction

Year	AADT	Year	AADT	Year	AADT
2024		2014		2004	
2023		2013		2003	
2022		2012		2002	
2021		2011		2001	
2020		2010		2000	
2019		2009	138	1999	
2018		2008		1998	
2017		2007		1997	
2016		2006		1996	
2015		2005		1995	



Historical Traffic Volume Summary

Station Details:

Sta ID:	078023
Sta Type:	Local Road Bridge
Map:	MapIt
District:	4
County:	Marion
Route:	078-CR-1038 -000
Route Desc:	HORAN LN

Begin MP:	1.7770
Begin Desc:	
End Mp:	1.9770
End Desc:	
Impact Year:	
Year Added:	

Newest Count:

AADT:	214
Year:	2009
% Single:	
% Combo:	
K Factor:	
D Factor:	

Definitions:

Sta. ID - Three digit county number + station number

MP - milepoint

Impact Year – year of significant change to traffic pattern within station segment

AADT – Annual Average Daily Traffic – the annualized average 24-hour volume of vehicles on a segment of roadway

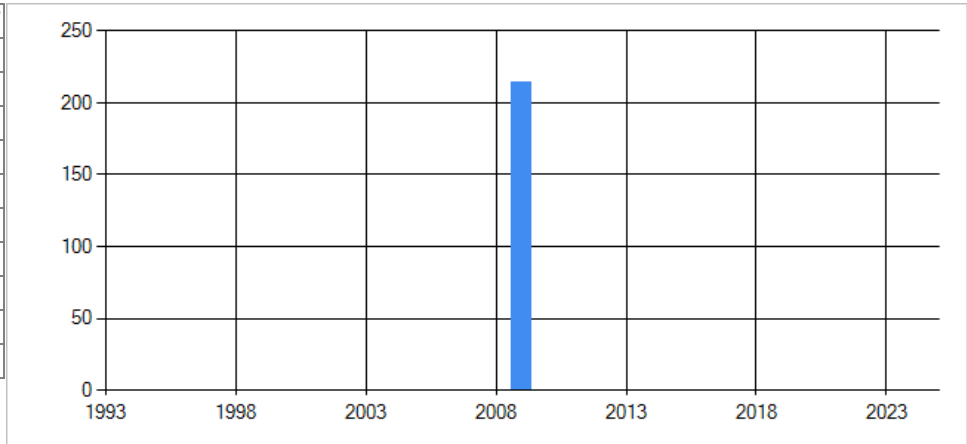
% Single – single unit truck volume as a percentage of the AADT

% Combo – combination truck volume as a percentage of the AADT

K Factor – peak hour volume as a percentage of the AADT

D Factor – percentage of peak hour volume flowing in the peak direction

Year	AADT	Year	AADT	Year	AADT
2024		2014		2004	
2023		2013		2003	
2022		2012		2002	
2021		2011		2001	
2020		2010		2000	
2019		2009	214	1999	
2018		2008		1998	
2017		2007		1997	
2016		2006		1996	
2015		2005		1995	



Historical Traffic Volume Summary

Station Details:

Sta ID:	078021
Sta Type:	Local Road Bridge
Map:	MapIt
District:	4
County:	Marion
Route:	078-CR-1035 -000
Route Desc:	GENE CAMPBELL RD

Begin MP:	0
Begin Desc:	
End Mp:	0.15
End Desc:	
Impact Year:	
Year Added:	

Newest Count:

AADT:	115
Year:	2009
% Single:	
% Combo:	
K Factor:	
D Factor:	

Definitions:

Sta. ID - Three digit county number + station number

MP - milepoint

Impact Year – year of significant change to traffic pattern within station segment

AADT – Annual Average Daily Traffic – the annualized average 24-hour volume of vehicles on a segment of roadway

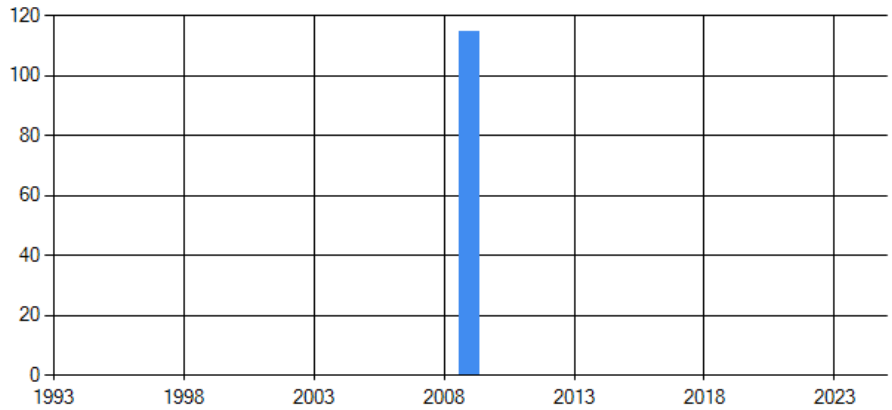
% Single – single unit truck volume as a percentage of the AADT

% Combo – combination truck volume as a percentage of the AADT

K Factor – peak hour volume as a percentage of the AADT

D Factor – percentage of peak hour volume flowing in the peak direction

Year	AADT	Year	AADT	Year	AADT
2024		2014		2004	
2023		2013		2003	
2022		2012		2002	
2021		2011		2001	
2020		2010		2000	
2019		2009	115	1999	
2018		2008		1998	
2017		2007		1997	
2016		2006		1996	
2015		2005		1995	



Appendix F

Glare Analysis Report

Northern Bobwhite Solar Project

EDF Renewables

Marion County, Kentucky

Glare Analysis

April 5, 2024



Capitol Airspace Group

capitolairspace.com

(703) 256 - 2485



Summary

EDF Renewables is proposing to construct photovoltaic (PV) arrays in Marion County, Kentucky (**Figure 1**). On behalf of EDF Renewables, Capitol Airspace performed an independent glare analysis utilizing ForgeSolar’s GlareGauge toolset to identify the potential for glare impacts. Specifically, this analysis considered the potential for glare impacts on Arnolds Airport (36KY) and Lebanon Springfield Airport-George Hoerter Field (6L2) approaches, as well as nearby residences and roadways.

The results of this analysis indicate that there are no predicted glare occurrences for either airport’s approaches as a result of the proposed single-axis tracking PV arrays. Additionally, it should be noted that the current Federal Aviation Administration (FAA) policy no longer considers the potential for glare impacts on aircraft approach paths resulting from off-airport PV projects. Since Arnolds Airport (36KY) and Lebanon Springfield Airport-George Hoerter Field (6L2) do not have an air traffic control tower (ATCT), an assessment of potential glare impacts on ATCT personnel was not required.

The results of this analysis predict green and yellow glare occurrences for nearby residences and green glare occurrences for nearby roadways as a result of the proposed single-axis tracking PV arrays. These results are based on the application of FAA glare standards in the absence of non-aviation regulatory guidelines.

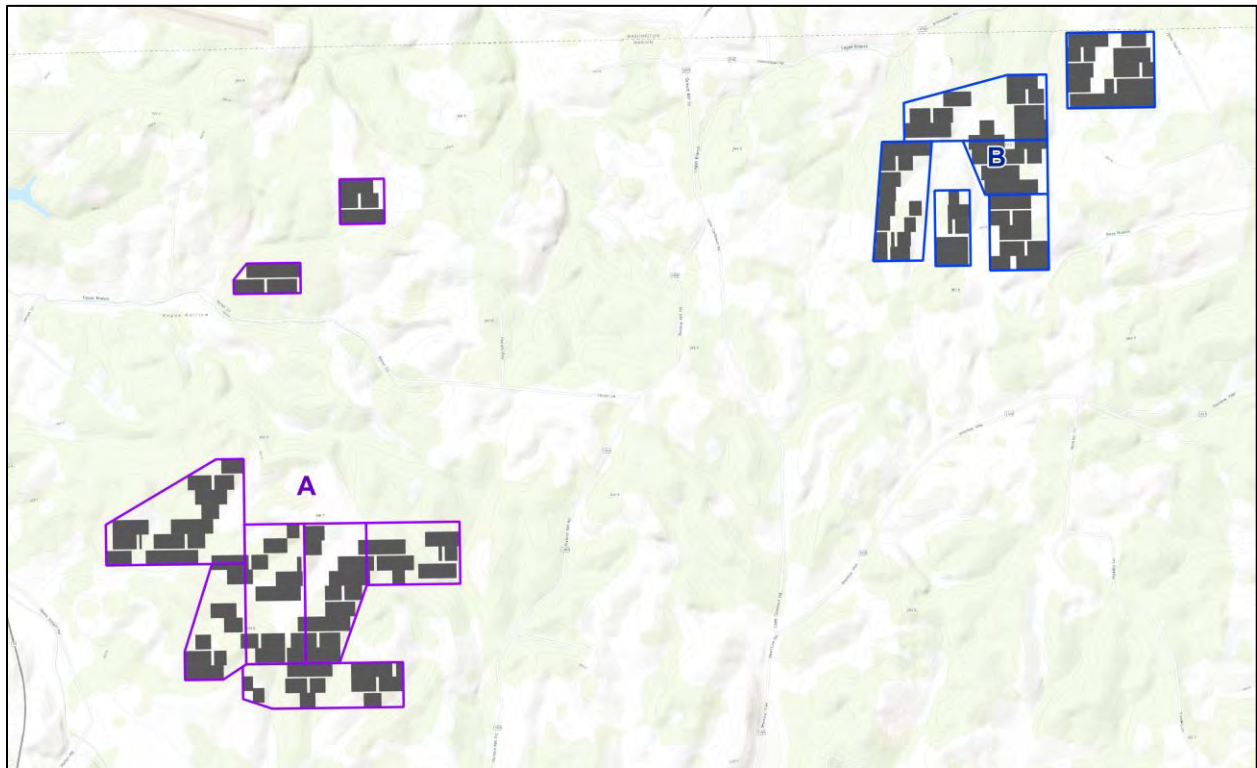


Figure 1: Northern Bobwhite project PV panel layout (gray) with sub-arrays for GlareGauge assessment (purple and blue outlines)



Methodology

In cooperation with the Department of Energy, the FAA developed and validated the Sandia National Laboratories Solar Glare Hazard Analysis Tool (SGHAT), now licensed through ForgeSolar as GlareGauge. ForgeSolar has enhanced GlareGauge for glare hazard analysis beyond the aviation environment. These enhancements include a route module for analyzing roadways as well as an observation point module for analyzing residences. However, it should be noted that GlareGauge does not automatically account for physical obstructions between reflectors and receptors.

GlareGauge analyzes the potential for glare over the entire calendar year in one-minute intervals from when the sun rises above the horizon until the sun sets below the horizon. The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. When GlareGauge identifies glare, the associated ocular impact is quantified into three categories based on the retinal irradiance and subtended angle (size/distance) of the glare source. These three categories are Green – low potential for after-image, Yellow – potential for after-image, and Red – potential for retinal burn (*Figure 2*).

The FAA policy for *Review of Solar Energy System Projects on Federally Obligated Airports* requires that proposed on-airport solar projects will not result in ocular impacts (no glare of any category) on the airport's ATCT cab. Although not required, the FAA encourages that off-airport solar energy systems in proximity to airports with ATCTs are assessed for potential ocular impact. Currently, there are no defined standards for acceptable ocular impact on residences or roadways.

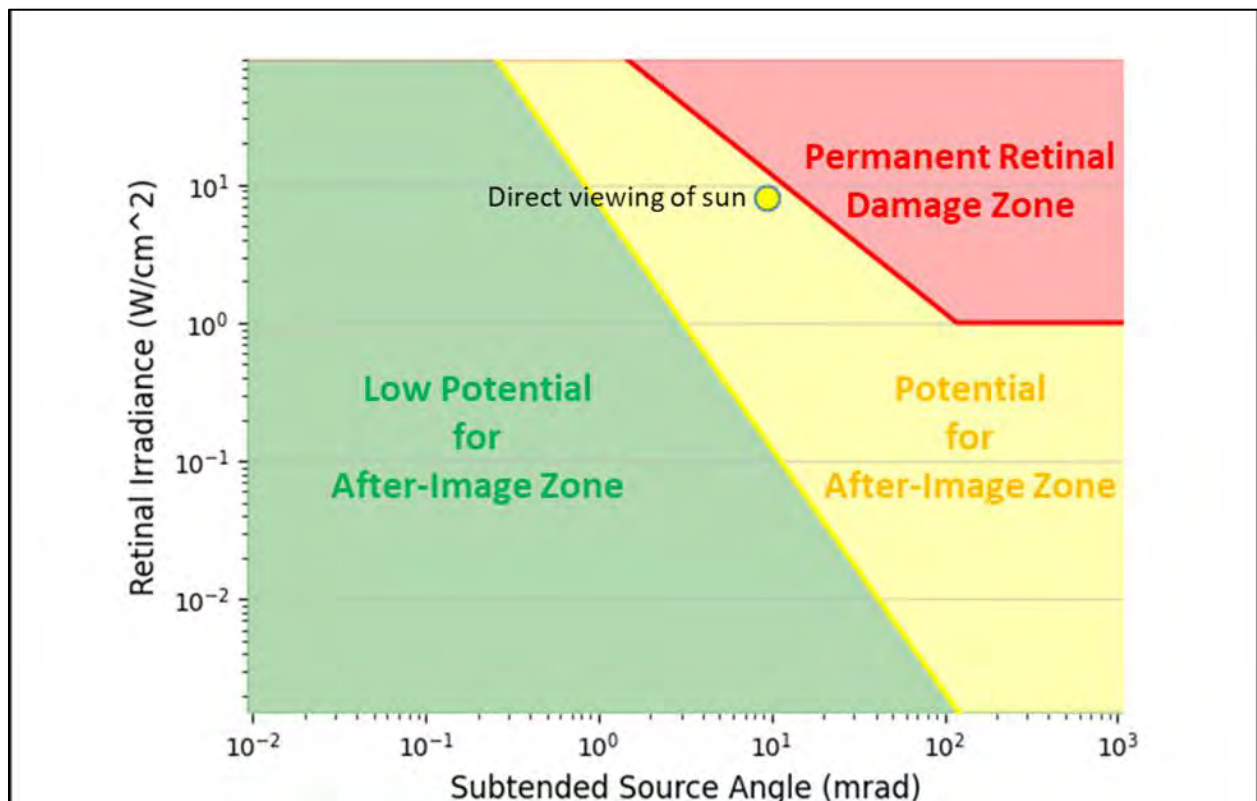


Figure 2: GlareGauge glare hazard plot depicting ocular impact as a function of retinal irradiance and subtended source angle



Data

PV array specifications (*Table 1*) as well as location and height information were provided by EDF Renewables. Based on this data, the PV arrays will rotate to track the sun through the range of rotation determined by the maximum tracking angle. When the sun’s position is outside the range of rotation, the single-axis tracking arrays will use a slope-aware shade backtracking strategy to reduce row-to-row shading (*Figure 3*). Backtracking will begin and end at a 4-degree resting angle as defined by the Resting Angle/Backtracking Limit parameter.

Runway end coordinates, elevations, threshold crossing heights (TCH), and visual glidepath angles (VGPA) were obtained from the FAA National Flight Data Center (NFDC) National Airspace System Resource (NASR) dataset. When the NASR dataset did not contain this data, aerial imagery, the United States Geological Survey (USGS) 1/3 arc-second Digital Elevation Model (DEM), and the FAA approved default settings (TCH: 50 feet, VGPA: 3.00°) were used.

Aerial imagery was used to determine observation point and route receptor locations in collaboration with EDF Renewables. The USGS 1/3 arc-second DEM was used to determine observation point ground elevations. Ground elevations along the assessed routes were calculated by GlareGauge using the Google Elevation service.

Table 1: Northern Bobwhite project PV array specifications

Parameter	Value
Rotation Axis Height	4.92 feet
Axis Tracking	Single-axis rotation
Tracking Axis Orientation	180°
Max Tracking Angle	±52°
Backtracking Strategy	Shade-slope
Resting Angle/Backtracking Limit	4°
Ground Coverage Ratio (GCR)	0.42
Panel Material	Lightly Textured Glass, With Anti-Reflection Coating

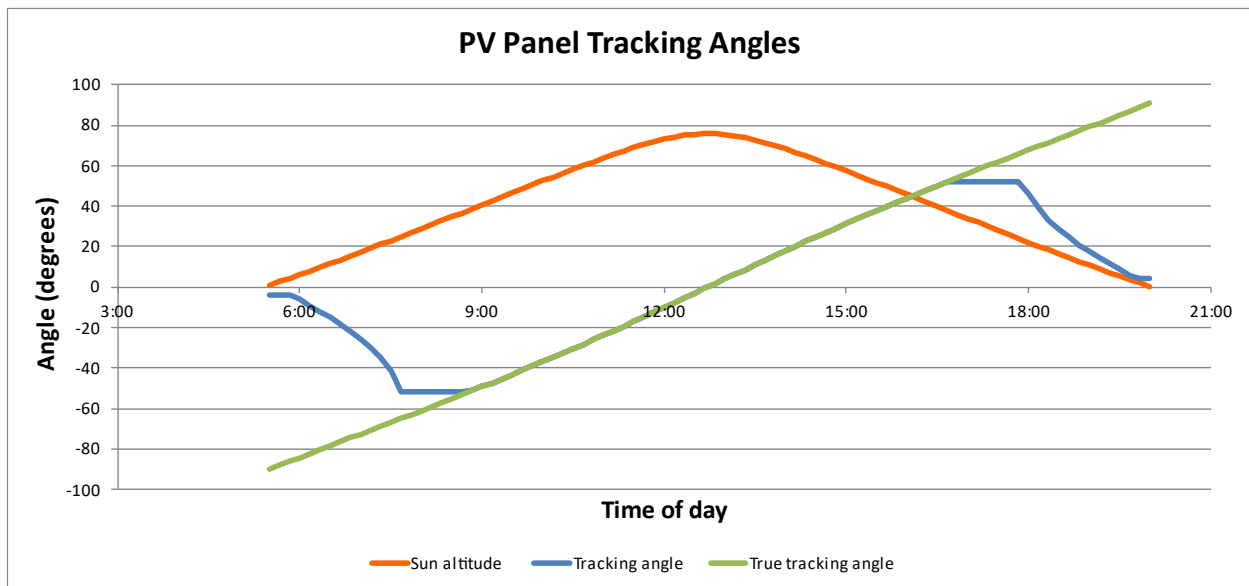


Figure 3: Sample PV panel tracking angle plot for June 21st



Results

Arnolds Airport (36KY)

The GlareGauge assessed the potential for glare occurrences along four approach path receptors (hashed black lines, [Figure 4](#)). Each approach path was assessed using a pilot restricted view with a vertical view restriction of 30 degrees downward and an azimuthal view restriction of 50 degrees left and right (100-degree total field of view).

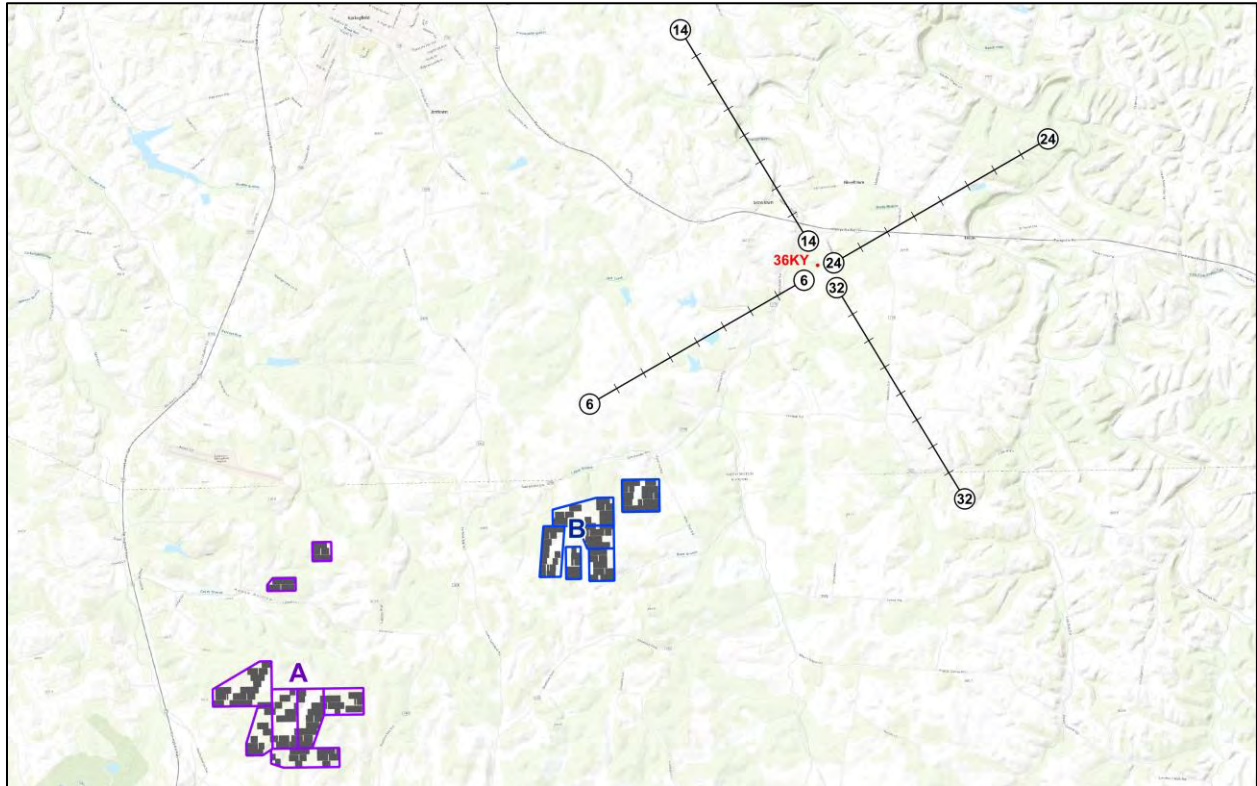


Figure 4: Arnolds Airport (36KY) approach paths (hashed black lines) in proximity to the Northern Bobwhite project

Runway 06/ 24

The GlareGauge results do not predict glare occurrences along the Runway 06 or Runway 24 approach paths.

Runway 14/ 32

The GlareGauge results do not predict glare occurrences along the Runway 14 or Runway 32 approach paths.



Lebanon Springfield Airport-George Hoerter Field (6I2)

The GlareGauge assessed the potential for glare occurrences along two approach path receptors (hashed black lines, *Figure 5*). Each approach path was assessed using a pilot restricted view with a vertical view restriction of 30 degrees downward and an azimuthal view restriction of 50 degrees left and right (100-degree total field of view).

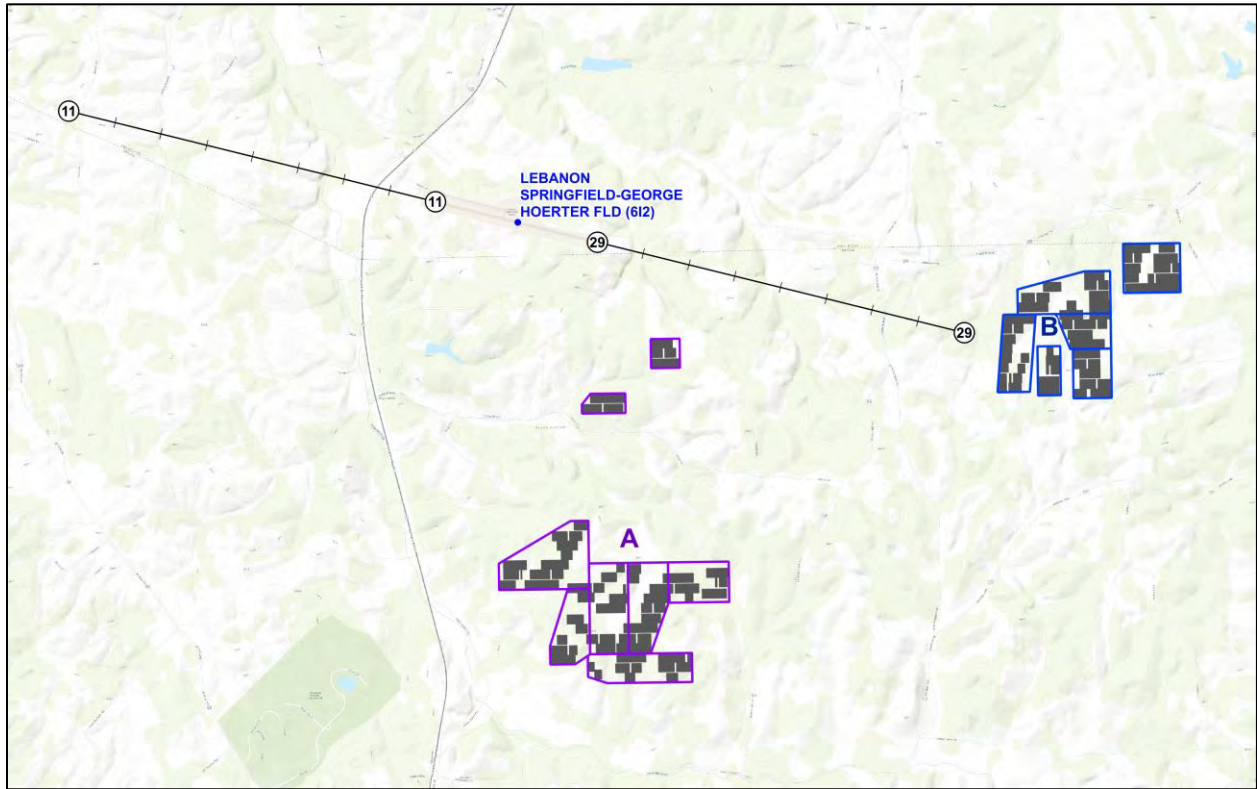


Figure 5: Lebanon Springfield Airport-George Hoerter Field (6I2) approach paths (hashed black lines) in proximity to the Northern Bobwhite project

Runway 11/29

The GlareGauge results do not predict glare occurrences along the Runway 11 or Runway 29 approach paths.



Observation Points

GlareGauge assessed the potential for glare occurrences at 98 discrete observation point receptors (black points, [Figure 6](#)). Each observation point was assessed at an eight-foot first story viewing height and a 16-foot second story viewing height. The GlareGauge results do not predict glare occurrences for 92 of the 98 observation points as a result of single-axis tracking PV arrays.

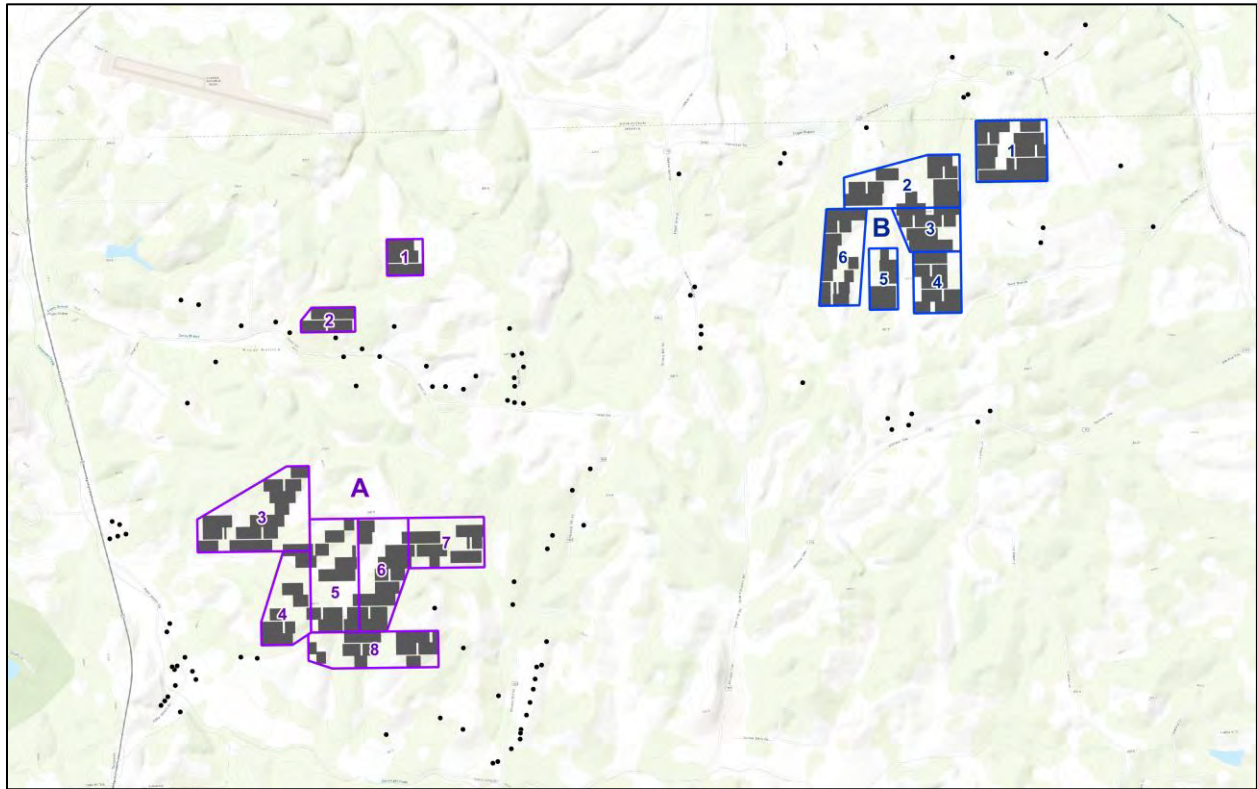


Figure 6: Discrete observation point receptors (black points) in proximity to the Northern Bobwhite Project

The GlareGauge results predict brief green glare occurrences in the early-morning and late-afternoon from March through August for OP 7, 34, 50, 51, 53, and 54 ([Table 2](#) & [Appendix A](#)). Specifically, green glare would emanate from sub-arrays A02, A04, A06, and A08 (faded green areas, [Figure 7](#), [Figure 8](#), [Figure 9](#) & [Figure 10](#)). Green glare is associated with a low potential for temporary after-image. Additionally, GlareGauge results predict brief yellow glare occurrences in the late-afternoon from May through August for OP 7 ([Table 2](#) & [Appendix A](#)). Yellow glare would emanate from sub-array A02 (faded yellow area, [Figure 7](#)). Yellow glare is associated with the potential for temporary after-image. These results are based on the application of FAA glare standards in the absence of non-aviation regulatory guidelines.

It is important to note that the glare resulting from the proposed single-axis tracking arrays occurs during early-morning or late-afternoon backtracking when the sun altitude is no greater than 2.9 degrees above the horizon. As a result, avoiding shallow backtracking angles in the early-morning or late-afternoon could mitigate the identified glare occurrences. Additional analysis would be required to determine the backtracking limit that would eliminate all the identified glare occurrences.



Table 2: Predicted glare occurrences for discrete observation point receptors in proximity to the Northern Bobwhite project

Receptor	Glare	Date		Monthly Frequency	Time (HH:MM)		Daily Duration (Minutes)	
		Start	End		Earliest	Latest	Longest	Average
		OP 1-6	None		-	-	-	-
OP 7	Green	25-Apr	19-Aug	Contiguous	05:34	20:01	12	4
	Yellow	8-May	2-Aug	Contiguous	19:33	20:02	6	4
OP 8-33	None	-	-	-	-	-	-	-
OP 34	Green	5-Mar	22-Jun	Contiguous	18:33	20:01	10	6
OP 35-49	None	-	-	-	-	-	-	-
OP 50	Green	18-May	22-Jun	Contiguous	19:42	20:01	5	3
OP 51	Green	25-May	11-Jul	Contiguous	19:47	20:02	3	2
OP 52	None	-	-	-	-	-	-	-
OP 53	Green	1-Jun	13-Jul	Contiguous	05:35	05:47	5	3
OP 54	Green	11-Jun	20-Jul	Contiguous	05:35	05:52	6	5
OP 55-98	None	-	-	-	-	-	-	-



Figure 7: Discrete observation point 7 (yellow point) receiving glare from Sub-Array A02



Figure 8: Discrete observation point 34 (green point) receiving glare from Sub-Array A06



Figure 9: Discrete observation points 50 and 51 (green points) receiving glare from Sub-Array A08



Figure 10: Discrete observation points 53 and 54 (green points) receiving glare from Sub-Array A04



Route Receptors

GlareGauge assessed the potential for glare occurrences along 11 route receptors. Each of the 11 roadways (dashed black lines, [Figure 11](#)) was assessed at a four-foot car viewing height and an eight-foot truck viewing height. The GlareGauge results do not predict glare occurrences for eight of the 11 roadways as a result of single-axis tracking PV arrays.

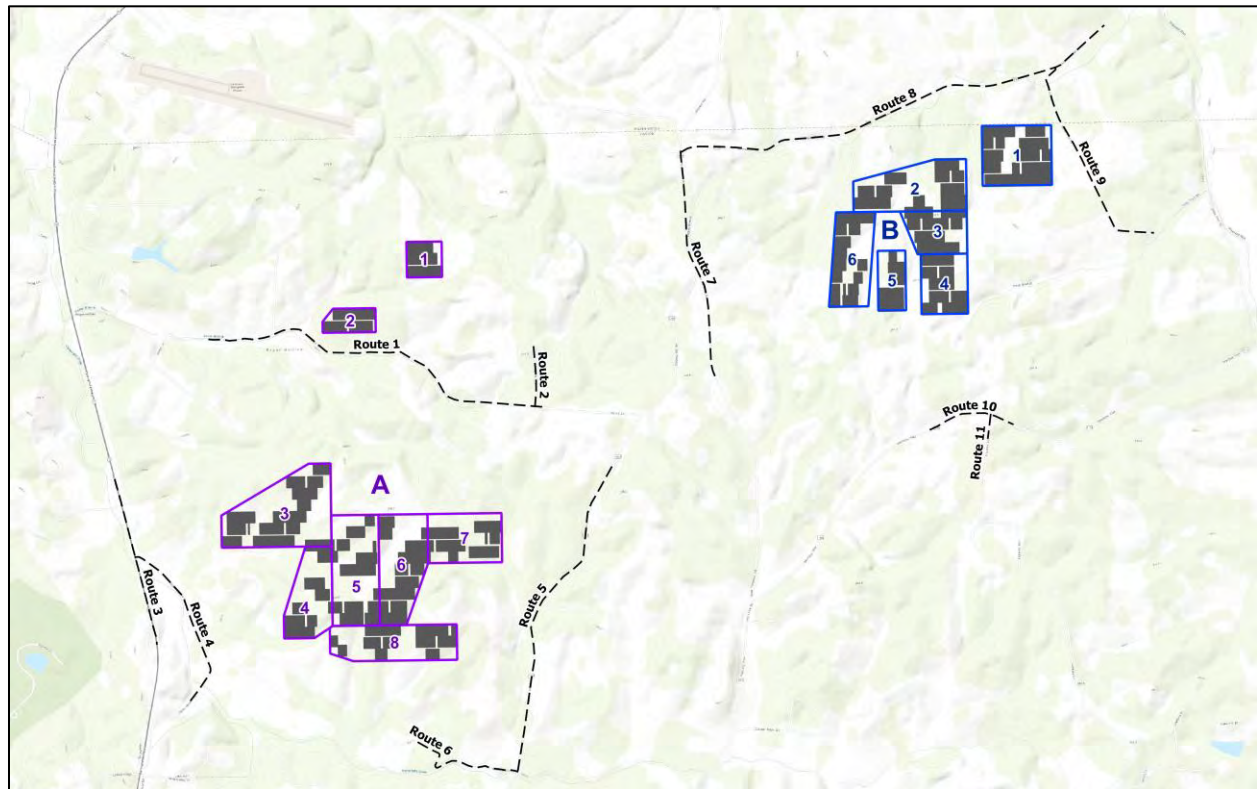


Figure 11: Route receptors (dashed black lines) in proximity to Northern Bobwhite Project

The GlareGauge results predict brief green glare occurrences in the late-afternoon from April to September for Route 1 and Route 9 ([Table 3](#) & [Appendix B](#)). Additionally, GlareGauge results predict brief green glare occurrences in the morning from December to January for Route 8 ([Table 3](#) & [Appendix B](#)). Green glare would emanate from sub-arrays A02, B01, and B05 (faded green area, [Figure 12](#), [Figure 13](#), & [Figure 14](#)). Green glare is associated with a low potential for temporary after-image. These results are based on the application of FAA glare standards in the absence of non-aviation regulatory guidelines.

It is important to note that the glare resulting from the proposed single-axis tracking arrays occurs during morning or late-afternoon backtracking when the sun altitude is no greater than 0.8 degrees above the horizon. As a result, avoiding shallow backtracking angles in the morning or late afternoon could mitigate the identified glare occurrences. Additional analysis would be required to determine the backtracking limit that would eliminate all the identified glare occurrences.



Table 3: Predicted glare occurrences for route receptors in proximity to the Northern Bobwhite project

Receptor	Glare	Date		Monthly Frequency	Time (HH:MM)		Daily Duration (Minutes)	
		Start	End		Earliest	Latest	Longest	Average
Route 2	None	-	-	-	-	-	-	-
Route 3	None	-	-	-	-	-	-	-
Route 4	None	-	-	-	-	-	-	-
Route 5	None	-	-	-	-	-	-	-
Route 6	None	-	-	-	-	-	-	-
Route 7	None	-	-	-	-	-	-	-
Route 8	Green	7-Dec	3-Jan	Contiguous	07:49	08:01	2	1
Route 9	Green	4-Apr	5-Sep	Contiguous	18:55	20:01	5	3
Route 10	None	-	-	-	-	-	-	-
Route 11	None	-	-	-	-	-	-	-



Figure 12: Route 1 with segments receiving glare (green lines) from Sub-Array A02

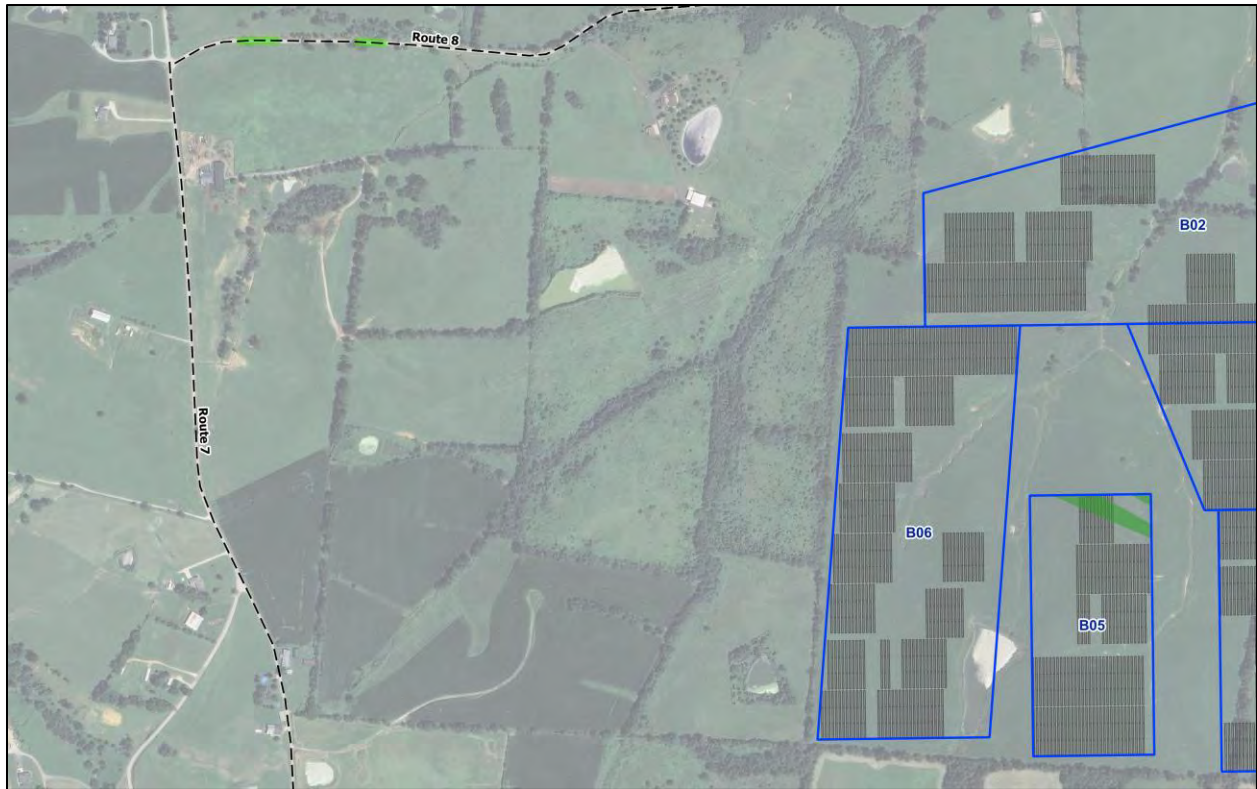


Figure 13: Route 8 with segments receiving glare (green lines) from Sub-Array B05



Figure 14: Route 9 with segments receiving glare (green lines) from Sub-Array B01



Conclusion

Capitol Airspace performed a glare analysis utilizing ForgeSolar's GlareGauge toolset to identify the potential for glare impacts resulting from the proposed Northern Bobwhite project. Specifically, this analysis considered the potential for glare impacts on Arnolds Airport (36KY) and Lebanon Springfield Airport-George Hoerter Field (6I2) approaches. This analysis also considered the potential for glare impacts on low-level receptors like residences and roadways in proximity to the proposed arrays.

Aircraft Approaches

GlareGauge does not predict any glare occurrences for aircraft approaching Arnolds Airport (36KY) or Lebanon Springfield Airport-George Hoerter Field (6I2). Additionally, it should be noted that the current FAA policy no longer considers the potential for glare impacts on aircraft approach paths resulting from off-airport PV projects. Since Arnolds Airport (36KY) and Lebanon Springfield Airport-George Hoerter Field (6I2) do not have an ATCT, an assessment of potential glare impacts on ATCT personnel was not required.

Low-Level Receptors

GlareGauge predicts brief green and yellow glare occurrences for nearby residences from March through August. Additionally, GlareGauge predicts brief green glare occurrences for roadways from April through September and December through January. However, the glare resulting from the proposed single-axis tracking array occurs during early-morning and late-afternoon backtracking when sun altitude angles are no greater than 2.9 degrees above the horizon. Avoiding shallow backtracking angles in the early-morning or late-afternoon could mitigate the identified glare occurrences. Additional analysis would be required to determine the backtracking limit that would eliminate all the identified glare occurrences.

These results are based on the application of FAA glare standards in the absence of non-aviation regulatory guidelines. As noted in the methodology, this glare analysis does not consider vegetation, fencing, or other natural obstructions. This glare analysis takes the most conservative approach in assessing the possibility of glare occurrences.

The GlareGauge component data used to conduct this analysis is available upon request. If you have any questions regarding the findings in this analysis, please contact [Dan Underwood](#) or [Sophia Bullard](#) at (703) 256-2485.

Appendix A

GlareGauge Assessment Results – Observation Points

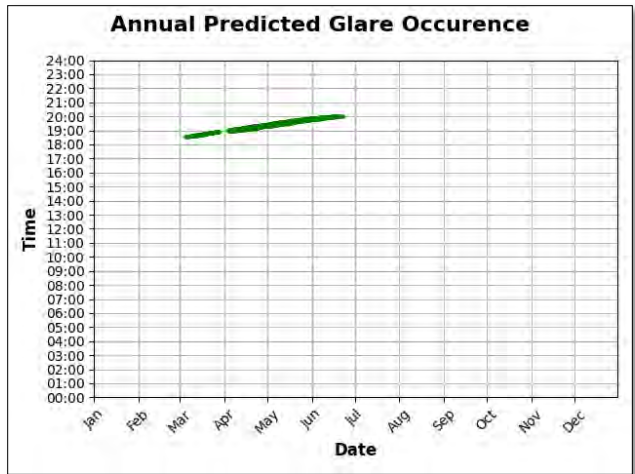
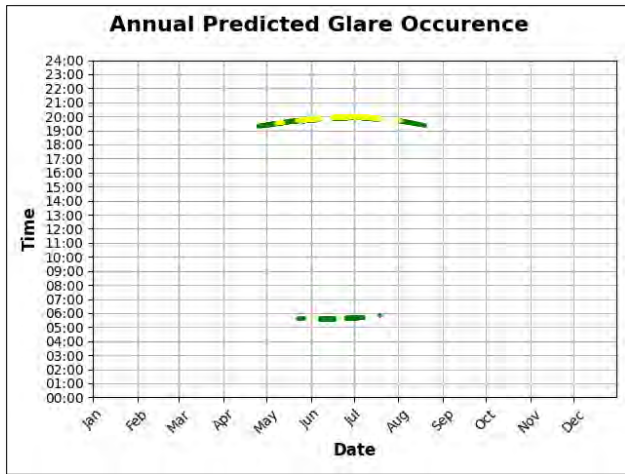


Figure 15: Annual predicted glare occurrence plot for OP 7 (left) and OP 34 (right)

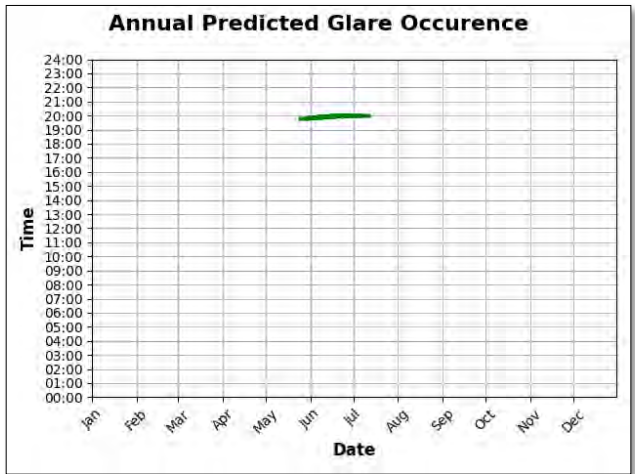
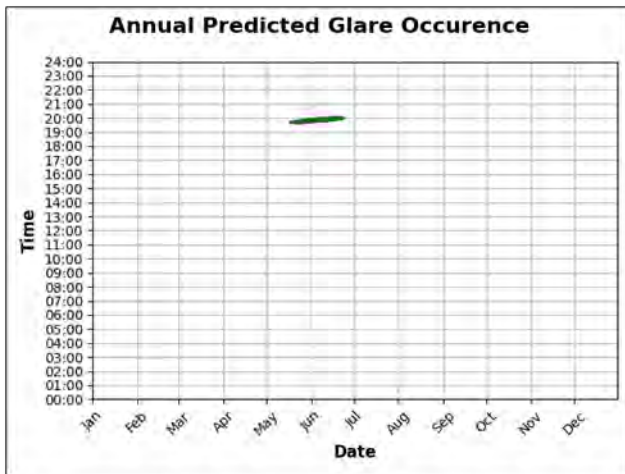


Figure 16: Annual predicted glare occurrence plot for OP 50 (left) and OP 51 (right)

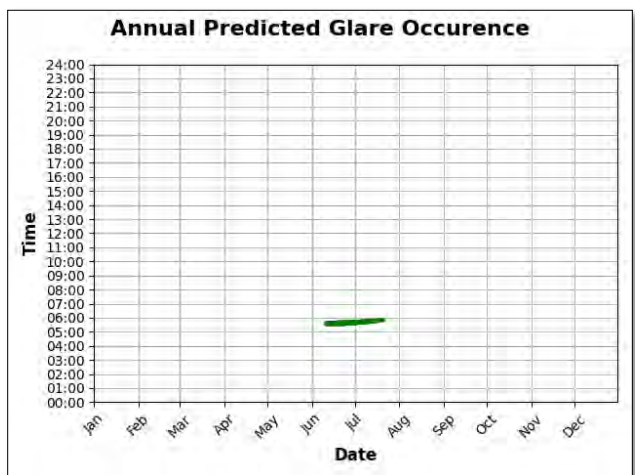
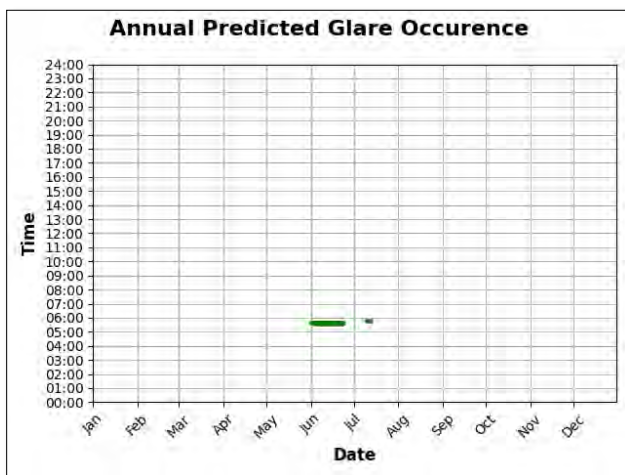


Figure 17: Annual predicted glare occurrence plot for OP 53 (left) and OP 54 (right)

Appendix B

GlareGauge Assessment Results - Routes

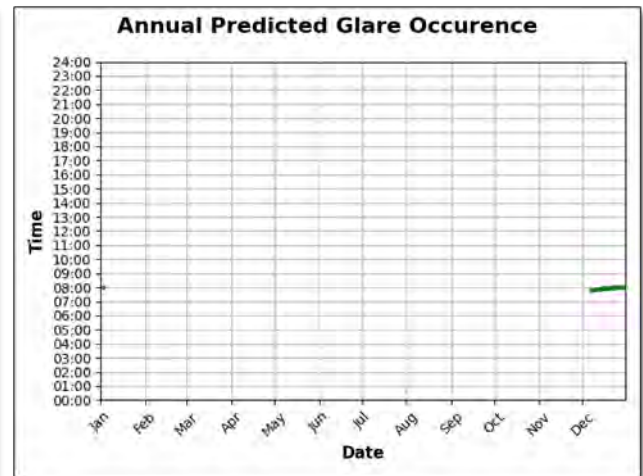
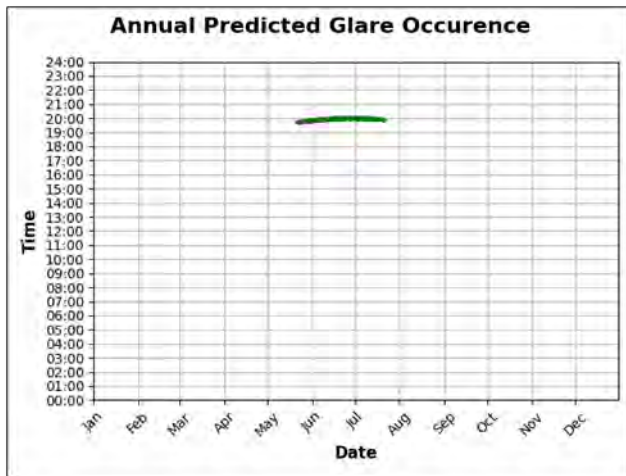


Figure 18: Annual predicted glare occurrence plot for Route 1 (left) and Route 8 (right)

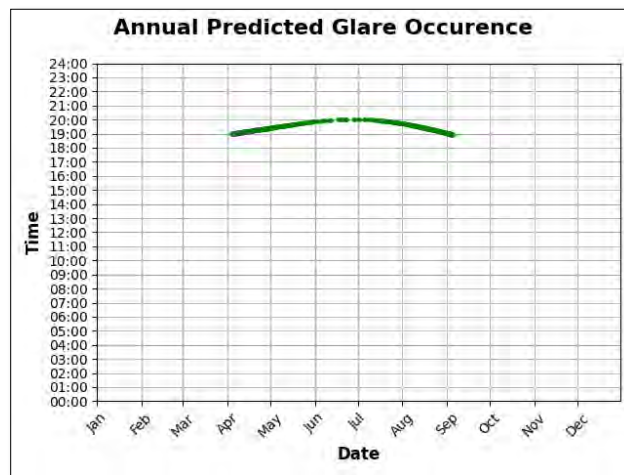


Figure 19: Annual predicted glare occurrence plot for Route 9

Appendix G

Phase I Environmental Site Assessment



**Northern Bobwhite Solar, Phase I
Environmental Site Assessment**

February 28, 2024

Prepared for:

Northern Bobwhite Solar LLC
15445 Innovation Dr,
San Diego, California, 92128

Prepared by:

Stantec Consulting Services Inc.
9200 Shelbyville Road, Suite 800
Louisville, Kentucky 40222-5136

Project No.: 172607795

Sign-off Sheet and Signatures of Environmental Professionals

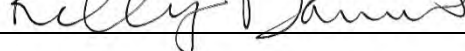
This document entitled Northern Bobwhite Solar, Phase I Environmental Site Assessment (Report) was prepared by Stantec Consulting Services Inc. ("Stantec") for the account of Northern Bobwhite Solar LLC (the "Client"). The conclusions in the Report are Stantec's professional opinion, as of the time of the Report, and concerning the scope described in the Report. The opinions in the document are based on conditions and information existing at the time the scope of work was conducted and do not take into account any subsequent changes. The Report relates solely to the specific project for which Stantec was retained and the stated purpose for which the Report was prepared. The Report is not to be used or relied on for any variation or extension of the project, or for any other project or purpose, and any unauthorized use or reliance is at the recipient's own risk.

Stantec has assumed all information received from the "Client" and third parties in the preparation of the Report to be correct. While Stantec has exercised a customary level of judgment or due diligence in the use of such information, Stantec assumes no responsibility for the consequences of any error or omission contained therein.

This Report is intended for use by the Client in accordance with Stantec's contract with the Client. The Client intends to divest the project to Eastern Kentucky Power Cooperative (EKPC) While the Report may be provided to applicable authorities having jurisdiction and others for whom the Client is responsible, Stantec does not warrant the services to any third party with the exception of EKPC. The report may not be relied upon by any other party without the express written consent of Stantec, which may be withheld at Stantec's discretion.

Author: 

Lucas Downs
Environmental Scientist

Quality Reviewer: 

Kelly Daniels
Environmental Scientist

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in § 312.10 of Title 40 of the Code of Federal Regulations, Part 312, (40 CFR 312). I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the property. I have developed and performed all the appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Independent Reviewer: 

Shane Kelley
Senior Biologist



NORTHERN BOBWHITE SOLAR, PHASE I ENVIRONMENTAL SITE ASSESSMENT

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Abbreviations

AAI	All Appropriate Inquiries
AST	Aboveground Storage Tank
ASTM	ASTM International
AUL	Activity Use Limitation
BER	Business Environmental Risk
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulation
CREC	Controlled Recognized Environmental Conditions
EEC	Kentucky Energy and Environmental Cabinet
EP	Environmental Professional
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
ft amsl	Feet above mean sea level
HREC	Historical Recognized Environmental Conditions
PCBs	Polychlorinated Biphenyls
REC	Recognized Environmental Conditions
SHWS	State Hazardous Waste Sites
USDA	United States Department of Agriculture
USGS	United States Geological Survey
UST	Underground Storage Tank
VEC	Vapor Encroachment Condition
VOCs	Volatile Organic Compounds



NORTHERN BOBWHITE SOLAR, PHASE I ENVIRONMENTAL SITE ASSESSMENT

Executive Summary
February 21, 2024

1.0 EXECUTIVE SUMMARY

Stantec Consulting Services Inc. (Stantec) has completed a Phase I Environmental Site Assessment (ESA) report of the property located at Northern Bobwhite Solar (the "Subject Property"), on behalf of Northern Bobwhite Solar LLC (the "Client"). The work was performed according to Stantec's proposal and terms and conditions dated December 18, 2023, and accepted by the Client on January 18, 2024. Northern Bobwhite Solar LLC (the "User") has been designated as the User of this report. The intended use of this Phase I ESA is for due diligence in support of acquisition of land for development of a solar farm.

The Phase I ESA was conducted in conformance with the requirements of ASTM International (ASTM) Designation ASTM E2247-16, and All Appropriate Inquiries (AAI) as defined by the United States Environmental Protection Agency (EPA) in Title 40 of the Code of Federal Regulations, Part 312 (40 CFR 312), except as may have been modified by the scope of work, and terms and conditions, requested by the Client. Any exceptions to, or deletions from, the ASTM or AAI practice are described in Section 2.3.

The Subject Property consists of an approximately 2,177.49-acre collection of parcels associated with the proposed Northern Bobwhite Solar Project in Marion and Washington Counties, Kentucky. The Subject Property sits approximately 2.5 miles northeast of Lebanon, Kentucky. The Subject Property is intersected by Horan Lane, Barbers Mill Road, and Gene Campbell Road. Simstown Road makes up the northern boundary of the Subject Property and Springfield Road (KY-55) makes up the western boundary. The Subject Property is rural and comprised primarily of agricultural land composed mainly pastureland. There are several small, forested areas throughout the Subject Property. Surrounding properties are similar to the Subject Property and are primarily agricultural with a few single-family residences scattered throughout the area. A Subject Property Location Map is provided as Figure 1. A Subject Property Vicinity Map illustrating the main features of the Subject Property and vicinity is provided as Figure 2. Photographs taken during the site reconnaissance visit are provided in Appendix A.

The following items of note were identified during this ESA:

- Twenty pole mounted transformers found on or adjacent to parcels across the entire Subject Property. Nine of the twenty transforms are assumed to contain PCBs due to the lack of a label indicating that there are no PCBs present in the transformers.
- The EDR Area report revealed a non-PCB mineral oil spill at the Lebanon Transformer station adjacent to parcel 064-001A, 064-001B, and 063-015.
- During the site reconnaissance, nine ASTs, two 55-gallon drums, a propane tank, and a few debris piles (Parcel 070-005) were observed.
 - Parcel 026-020 contained:
 - 150-gallon trailer diesel AST
 - 2 - 1,000-gallon AST that were rusted
 - Parcel 070-035 contained:



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- 500-gallon propane tank.
- 2- 55-gallon empty drums.
- Parcel 064-002 contained:
 - 500-gallon diesel AST
- Parcel 070-007 contained:
 - 500-gallon diesel AST
- Parcel 064-001A contained:
 - 500-gallon diesel AST
- Parcel 063-017 contained:
 - 150-gallon diesel AST
- Parcel 835302691 contained:
 - Approximately 10,000-gallon AST.
- A 500-gallon diesel AST was observed on parcel 026-020. An odor was noted near the tank and there were signs of stressed vegetation underneath. The stressed vegetation is likely due to being covered by the AST rather than a release of diesel fuel to the surrounding soil. Due to the lack of soil staining observed this finding is considered *de minimus*,

We have performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E2247-16 of Northern Bobwhite Solar, or the "Subject Property". Any exceptions to, or deletions from, this practice are described in Section 2.3 of this report. No recognized environmental conditions (RECs), Controlled RECs (CRECs), and/or significant data gaps in connection with the Subject Property were identified.

The preceding summary is intended for informational purposes only. Reading of the full body of this report is recommended.



NORTHERN BOBWHITE SOLAR, PHASE I ENVIRONMENTAL SITE ASSESSMENT

Introduction
February 21, 2024

2.0 INTRODUCTION

The objective of this Phase I ESA was to perform AAI into the past ownership and uses of the Subject Property consistent with good commercial or customary practice as outlined by ASTM International (ASTM) in “Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process for Forestland or Rural Property,” Designation E2247-16. “All Appropriate Inquiries” is the process for evaluating a property’s environmental conditions for the purpose of qualifying for landowner liability protections under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) following final rule of Part 312 of Title 40, Code of Federal Regulations (40 CFR Part 312). The purpose of this Phase I ESA was to identify, to the extent feasible, adverse environmental conditions including recognized environmental conditions (“RECs”) of the Subject Property.

The ASTM E2247-16 standard indicates that the goal of the Phase I ESA is to identify RECs, as well as historical recognized environmental conditions (“HRECs”) and controlled recognized environmental conditions (“CRECs”) that may exist at a property. The term “recognized environmental conditions” is defined as:

- 1) the presence of hazardous substances or petroleum products in, on, or at the Subject Property due to a release to the environment;
- 2) the likely presence of hazardous substances or petroleum products in, on, or at the Subject Property due to a release or likely release to the environment; or
- 3) the presence of hazardous substances or petroleum products in, on, or at the Subject Property under conditions that pose a material threat of a future release to the environment.

ASTM defines a “HREC” as a previous release of hazardous substances or petroleum products affecting the Subject Property that has been addressed to the satisfaction of the applicable regulatory authority and meets current unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (e.g., activity and use limitations or other property use limitations). A HREC is not considered a REC.

ASTM defines a “CREC” as a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (e.g., as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), but with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (e.g., activity and use limitations, institutional controls, or engineering controls).

As defined by ASTM, RECs can include hazardous substances or petroleum products present under conditions in compliance with laws if that presence represents a material threat of future release. The release of hazardous substances or petroleum products is, however, not a REC if that presence is a *de minimis* condition. *De minimis* conditions are minor releases that generally do not present a material risk



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to human health and would not likely be subject to enforcement action if brought to the attention of governmental agencies. ASTM also considers the potential for a business environmental risk (BER), defined as a risk which can have a material environmental or environmentally driven impact on the business associated with the current or planned use of the Subject Property, not necessarily limited to those environmental issues required to be investigated by the ASTM standard. Consideration of BERs may involve addressing one or more ASTM non-scope considerations.

This Phase I ESA was conducted in accordance with our proposal to EDF Renewables Inc. dated December 12, 2023, and Client's authorization on January 18, 2024. The scope of work conducted during this Phase I ESA consisted of a visual reconnaissance of the Subject Property, interviews with key individuals, and review of reasonably ascertainable documents. The scope of work did not include an assessment for environmental regulatory compliance of any facility ever operated at the Subject Property (past or present), or sampling and analyzing of environmental media. Stantec was not contracted to perform an independent evaluation of the purchase or lease price of the Subject Property and its relationship to current fair market value. The conclusions presented in this Phase I ESA report are professional opinions based on data described herein. The opinions are subject to the limitations described in Section 2.3.

ASTM E2247-16 notes that the availability of record information varies from source to source. The User or Environmental Professional (EP) is not obligated to identify, obtain, or review every possible source that might exist with respect to a property. Instead, ASTM identifies record information that is reasonably ascertainable from standard sources. "Reasonably ascertainable" means:

1. Information that is publicly available;
2. Information that is obtainable from its source within reasonable time and cost constraints; and
3. Information that is practicably reviewable.

2.1 SUBJECT PROPERTY DESCRIPTION

The Subject Property consists of approximately 2,177.49 acres of mixed farmland and forest in Marion and Washington Counties, Kentucky. Adjoining properties, as well as the nearby surrounding area, are mainly agricultural, forested, and dispersed single-family residential. Landowner name, parcel number and acreage for each parcel is listed below. A Subject Property Location Map is illustrated on Figure 1. A Subject Property Vicinity Map illustrating the main features of the Subject Property is provided as Figure 2. Photographs taken during the site reconnaissance visit are provided in Appendix A.



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Landowner Name	Parcel Number	Acreage
Campbell Eugene & Campbell Cynthia	070-035	99.19
Campbell Eugene & Campbell Cynthia	070-035	1.19
Garrett Land Corp	070-017-04	52.36
Clark Andrew Charles & Clark Alice	070-007	102.19
Hodgens Robert & Hodgens Sherri H	070-005	335.52
Garrett Land Corp	070-004-01	63.18
Grubbs Billy S & Grubbs Marlene K	070-001	125.43
Sullivan Mollie & Blair Jeremy	064-002-03-04	35.18
Brussell Charles P & Brussell Paula Ann	064-002-03	70.66
Thompson Aileen & Thompson Jimmy	064-002	69.95
Murphy Family Trust	064-001B	28.69
Lockett Edward G	064-001A	94.56
Murphy Family Trust	064-001-03	75.78
Goodin Charles R & Goodin J Don	064-001	112.66
Mattingly William Cole	063-021	133.70
Murphy Family Trust	063-017	380.28



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Clark David C	063-015	115.86
Mattingly William Cole	063-008-02	24.16
Murphy Clarence W & Murphy Melissa	063-007	14.56
Hodgen Robert T & Hodgen Sherri H	026-020	141.65
Clark Andrew Charles & Clark Alice	835302724	1.56
Sns Rentals LLC	835302691	99.18

2.2 SPECIAL TERMS, CONDITIONS, AND ADDITIONAL ASSUMPTIONS

There were no special terms, conditions, or additional assumptions associated with this Phase I ESA.

2.3 EXCEPTIONS AND LIMITING CONDITIONS

This report documents work that was performed in accordance with generally accepted professional standards at the time and location in which the services were provided and given the schedule and budget constraints established by the client. No other representations, warranties, or guarantees are made concerning the accuracy or completeness of the data or conclusions contained within this report, including no assurance that this work has uncovered all potential and actual liabilities and conditions associated with the Subject Property.

This report provides an evaluation of selected environmental conditions associated with the Subject Property that was assessed at the time the work was conducted and is based on information obtained by and/or provided to Stantec at that time. There are no assurances regarding the accuracy and completeness of this information received from others.

Conclusions made within this report consist of Stantec's professional opinion as of the time of the writing of this report and are based solely on the scope of work described in the report, the limited data available, and the results of the work. They are not a certification of the Subject Property's environmental condition.

The client did not provide or contract Stantec to provide recorded title records or search results for environmental liens or activity and use limitations encumbering the property or in connection with the



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Subject Property. Stantec did not obtain historical records that document the property history in 5-year intervals and this resulted in data gaps. Although this represents data gaps, these data gaps are not considered to impact the EPs ability to identify RECs unless stated as such. Based on the information obtained during the course of this ESA and general knowledge of development at and near the Subject Property, the absence of this information did not affect the ability of the EPs to identify RECs, HRECs, CRECs, or *de minimis* conditions.

This report has been prepared for the exclusive use of the client identified herein and any use of or reliance on this report by any third party is prohibited, except as may be consented to in writing by Stantec or as required by law. The provision of any such consent is at Stantec's sole and unfettered discretion and will only be authorized pursuant to the conditions of Stantec's standard form reliance letter. Stantec assumes no responsibility for losses, damages, liabilities, or claims, howsoever arising, from third party use of this report.

Project Specific limiting conditions are provided in Section 2.2.

The conclusions are based on the conditions encountered at the Subject Property by Stantec at the time the work was conducted.

As the purpose of this report is to identify Subject Property conditions which may pose an environmental risk; the identification of non-environmental risks to structures or people on the Subject Property is beyond the scope of this assessment.

The findings, observations, and conclusions expressed by Stantec in this report are not an opinion concerning the compliance of any past or present owner or operator of the Subject Property which is the subject of this report with any Federal, state, provincial or local law or regulation.

This report presents professional opinions and findings of a scientific and technical nature. It does not and shall not be construed to offer a legal opinion or representations as to the requirements of, nor compliance with, environmental laws, rules, regulations, or policies of Federal, state, provincial or local governmental agencies.

Stantec specifically disclaims any responsibility to update the conclusions in this report if new or different information later becomes available or if the conditions or activities on the property subsequently change.



NORTHERN BOBWHITE SOLAR, PHASE I ENVIRONMENTAL SITE ASSESSMENT

Introduction
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2.4 PERSONNEL QUALIFICATIONS

This Phase I ESA was conducted by, or under the supervision of, an individual that meets the ASTM definition of an EP. The credentials of the EP and other key Stantec personnel involved in conducting this Phase I ESA are provided in Appendix B.



NORTHERN BOBWHITE SOLAR, PHASE I ENVIRONMENTAL SITE ASSESSMENT

User-Provided Information
February 21, 2024

3.0 USER-PROVIDED INFORMATION

ASTM E2247-16 describe responsibilities of the User to complete certain tasks in connection with the performance of “All Appropriate Inquiries” into the Subject Property. The ASTM standard requires that the EP request information from the User on the results of those tasks because that information can assist in the identification of RECs, CRECs, HRECs, or *de minimis* conditions in connection with the Subject Property. Towards that end, Stantec requested that the User provide the following documents and information:

Description of Information	Provided (Yes / No)	Description and/or Key Findings
User Questionnaire and/or Interview	Yes	The returned user questionnaire provided no knowledge of environmental hazards at the Subject Property.
Environmental Liens or Activity and Use Limitations (AUL)	Yes	The User indicated that there are deed restrictions, covenants, and conditions within different parcels of the Subject Property.
Previous Environmental Permits or Reports Provided by User	No	Not provided.
Purpose of the Phase I ESA	Yes	The intended use of the Phase I is for acquisition in support of a solar farm development.

Stantec forwarded the ASTM recommended User Questionnaire to Scott Wentzell, Associate Director - Development of EDF Renewables. The completed User Questionnaire returned to us by Mr. Wentzell and dated January 23, 2024, is included in Appendix C.

The User provided information is included in Appendix C.



NORTHERN BOBWHITE SOLAR, PHASE I ENVIRONMENTAL SITE ASSESSMENT

Records Review
February 21, 2024

4.0 RECORDS REVIEW

The objective of consulting historical sources of information is to develop the history of the Subject Property and surrounding area and evaluate if past uses may have resulted in RECs. Physical setting records are evaluated to determine if the physical setting may have contributed to adverse environmental conditions in connection with the Subject Property. During the review of historical records, Stantec attempted to identify uses of the Subject Property from the present to the first developed use of the Subject Property. Stantec's research included the reasonably ascertainable and useful records described in this section.

4.1 PHYSICAL SETTING

A summary of the physical setting of the Subject Property is provided in the table below with additional details in the following subsections:

Topography:	Stantec reviewed the 2022 Lebanon East, Lebanon West, Springfield, and Saint Catharine United States Geological Service (USGS) Topographic Quadrangles, 1:24,000 Scale. The Subject Property is hilly and undulating in elevation with obvious slope changes towards Casey Branch, Cartwright Creek, and Buck Branch. The parcels of the Subject Property range from 755 feet to 960 feet above mean sea level (ft amsl) (EDR, 2024).
Soil/Bedrock Data:	According to the United States Department of Agriculture (USDA) National Resources Conservation Service (NRCS) Web Soil Survey, the Subject Property is made up of many different soils. The most common soils are Lowell-Faywood silt loams (26.5%), Lowell-Sandview silt loams (12.4%), Lowell silty clay (10.8%), and Faywood silty clay loam (10.2%) (USDA-NRCS 2024). The bedrock that underlies this region is Ordovician-age Drake's Formation made of limestone and shale. Depth to bedrock is between 40 to 60 inches below ground surface (bgs). (NRCS, 2024).
Estimated Depth to Groundwater/ Estimated Direction of Gradient:	The estimated depth to groundwater is between 0 and 25 feet bgs (EDR, 2024).
NOTE: Site-specific groundwater flow direction and depth can only be determined by conducting site-specific testing, which Stantec has not conducted.	



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Records Review
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4.1.1 Subject Property Topography and Surface Water Flow

The Subject Property is approximately 755 to 960 ft amsl. There is approximately 200 feet of topographic relief across all parcels of the Subject Property. Based on the topography, surface water on the Subject Property infiltrates the ground surface or flows overland to Casey Branch, Cartwright Creek, and Buck Branch. Surface water may also flow to the farm ponds in the surrounding area.

4.1.2 Regional and Subject Property Geology

The Subject Property is located in the Bluegrass Physiographic region, more specifically the Outer Bluegrass. (EPA ecoregions, 1997). The Subject Property is made up of many different soils. The most common soils are Lowell-Faywood silt loams (26.5%), Lowell-Sandview silt loams (12.4%), Lowell silty clay (10.8%), and Faywood silty clay loam (10.2%) (USDA-NRCS 2024). The bedrock that underlies this region is Ordovician-age Drake's Formation made of limestone and shale. Depth to bedrock is between 40 and 60 inches bgs (NRCS, 2024).

4.1.3 Regional and Subject Property Hydrogeology

The shallow water table is often a subdued expression of surface topography. Shallow groundwater generally flows from areas of groundwater recharge, such as hills and broad uplands, to areas of groundwater discharge, such as wetlands, rivers, and lakes. Based on the local surface topography, local shallow groundwater is expected to flow towards the perennial streams, Casey Branch, Cartwright Creek, and Buck Branch. Other man-made features such as wells, roads, filled areas, buried utility lines and sewers, and drainage ditches may alter the natural shallow groundwater flow direction. The depth to shallow groundwater is estimated to be between 0 to 25 feet below grade (EDR, 2024).

4.2 FEDERAL, STATE AND TRIBAL ENVIRONMENTAL RECORDS

A regulatory agency database search report was obtained from Environmental Data Resources, Inc. (EDR), a third-party environmental database search firm. A complete copy of the database search report, including the date the report was prepared, the date the information was last updated, and the definition of databases searched, is provided in Appendix D.

Stantec evaluated the information listed within the database relative to potential impact to the Subject Property, assessing the potential for impacts based in part on the physical setting. As part of this process, inferences have been made regarding the likely groundwater flow direction at or near the Subject Property. As described in 4.1.3, the inferred shallow groundwater flow direction is likely to be in the south. Observations about the Subject Property and adjoining properties made during the Subject Property reconnaissance are provided in more detail in Section 5.

4.2.1 Listings for Subject Property

The Subject Property was not identified in the environmental database report.



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4.2.2 Listings for Adjoining and Nearby Sites with Potential to Impact Subject Property

Stantec assessed data presented in the environmental agency database search report to evaluate the potential for conditions on adjoining and nearby sites to pose a REC, CREC, or HREC for the Subject Property. The evaluation included an opinion of the potential for contamination by hazardous substances or petroleum products to migrate to the Subject Property from an adjoining or nearby site, including by vapor migration or encroachment (i.e., potential for a vapor encroachment condition [VEC]. ASTM E2600-22 Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions (ASTM, 2022) was used as the basis for a Tier I Vapor Encroachment Screen (VES) for the Subject Property. This included evaluation of release sites within 1/10 mile for Petroleum Hydrocarbon releases, and 1/3 mile for volatile and semi-volatile organic compound (VOC, SVOC), plus other potential vapor phase contaminants (such as mercury).

Based on distance from the Subject Property, Stantec considers the listings in the database search report provided in Appendix D to not constitute a REC for the Subject Property.

Listed Facility Name/Address	Database Listing(s)	Distance/Direction from Subject Property
LG&E Kentucky Utility Radio Station Road Lebanon, KY 40033	SHWS	0.034 Northeast cross-gradient
<p>On March 22, 2018, a release of 1,670 gallons of non-PCB mineral oil occurred at KU's Lebanon substation due to equipment failure. Stantec submitted a records request to the Kentucky Energy and Environment Cabinet (EEC) and received a Notice of Completion Letter Option C (Restoration). According to the letter, the substation was equipped with secondary containment, and the impacted soil was excavated. The adjacent bottomland near Cartwright Creek had underflow dams, booms, and absorbent pads used to contain the oil, and impacted soils was excavated. Soil samples were collected approximately every 25 feet to confirm the concentrations were below the residential remedial soil value for medium distillates. Restoration was complete on January 3, 2020, after documentation of the removal of all engineered, erosion, and sediment controls, grade, and drainage improvement, and seeding of the disturbed area. Due to the proper documentation of the cleanup, this site has been determined to not be a REC to the Subject Property.</p>		

4.3 LOCAL/REGIONAL ENVIRONMENTAL RECORDS

Stantec checked the following sources to obtain information pertaining to Subject Property use and/or indications of RECs in connection with the Subject Property:



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4.3.1 Marion County Solid Waste & Environmental Office

Agency Name, Contact Information, Date	Finding
Keith Brock, Solid Waste & Environmental Office marioncoswc@windstream.net 02/21/24	Stantec contacted the Solid Waste & Environmental Office of Marion County about past environmental issues that may have on the Subject Property. No response has been received at the time of this report submission. If pertinent information is received, it will be forwarded to the User.

4.3.2 Local Building and/or Planning Department Records

Agency Name, Contact Information, Date	Findings
Devon Murphy, Zoning Administrative Official dmurphy@lebanonky.org 02/21/24	Stantec contacted Lebanon, KY Planning and Zoning Department about zoning information they may have on the Subject Property. No response has been received at the time of this report submission. If pertinent information is received, it will be forwarded to the User.

4.3.3 Kentucky Energy and Environmental Cabinet

Agency Name, Contact Information, Date	Findings
Pamela G Delk, Kentucky EEC Pamela.delk@ky.gov 02/16/24	Pamela provided the closure documentation about the SHWS listing for the spill of non-PCB mineral oil at the KU's Lebanon substation. This documentation showed that this spill had been properly cleaned up and is not an environmental hazard to the Subject Property.

4.4 HISTORICAL RECORDS REVIEW

4.4.1 Land Title Records/Deeds

Land title records, deeds, environmental liens, and activity and use limitation documentation was not provided by the User, and public records were not searched by Stantec.

4.4.2 Aerial Photographs

Stantec reviewed historical aerial photographs provided by Environmental Data Resources, Inc. (EDR). The general type of activity on a property and land use changes can often be discerned from the type and layout of structures visible in the photographs. However, specific elements of a facility's operation usually cannot be discerned from aerial photographs alone. The following table summarizes Stantec's



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observations of the reviewed historical aerial photographs. Copies of the historical aerial photographs are provided in Appendix E.

Year	Scale	Observations of Subject Property and Adjoining/Nearby Properties
1951	1" = 1,500'	The Subject Property is agricultural and forested with surrounding properties similar with a few dispersed single-family residences. There are several rural roads throughout the surrounding area. State Route 55 is visible in the west. Gene Campbell Road, Barbers Mill Road, and Simmstown Road are also visible.
1972	1" = 1,500'	There is no noticeable change from the previous aerial map.
1985	1" = 1,500'	State Route 55 has been improved and there are a few more dispersed residential areas throughout. Land use of the Subject Property remains agricultural with small, forested areas. Lebanon Springfield Airport is also visible.
1997,1998	1" = 1,500'	There are a few new patches of forested area along Horan Lane. There appears to be some development towards Lebanon along State Route 55. Much of the Subject Property and surrounding areas have remained unchanged.
2008	1" = 1,500'	Development around State Route 55 near Lebanon has increased. Lebanon Springfield Airport is under construction. There is an increase of dispersed residences throughout the area. Barbers Mill Road has had an influx of houses being constructed. The land use for the Subject Property remains agricultural with small, forested areas.
2012	1" = 1,500'	Development around State Route 55 near Lebanon has increased. Lebanon Springfield Airport is finished with their runway expansion. There is an increase of dispersed residences throughout the area. Short Line Pike just south of the Subject Property has an influx of houses. The land use for the Subject Property remains agricultural with small, forested areas.
2016	1" = 1,500'	There is no noticeable change from the previous aerial map.
2020	1" = 1,500'	Development around State Route 55 near Lebanon has increased. There are no other significant changes to the Subject Property and surrounding areas. The land use for the Subject Property remains agricultural with small, forested areas.

The EDR Aerial Photo Decade Package, Inquiry #7566597.4, February 13, 2024.

No RECs were noted during the review of the historical aerial photographs.

4.4.3 City Directories

Stantec retained a third party to research available city directories for the Subject Property and adjoining and nearby properties, in approximately five-year intervals. Copies of the city directory listings are provided in Appendix E.

The following is a summary of Stantec’s review of the city directory listings:



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Subject/Adjoining Properties	Year	Listed Occupants
1955 Springfield Road	1955, 2000	Cook Animal Hospital Cook, James O
2615 Springfield Road	2000	Clark, David
2770 Springfield Road	2000	Owen, George
870 Horan Lane	1995	Murphy, Ronald
	2000	Crane, Amanda E
	2005, 2017	Mitchell, Freda
1000 Horan Lane	2005, 2014	Roution, James
	2010	Occupant Unknown
	2020	Robert Ludecker
1070 Horan Lane	2010, 2014, 2017	Murphy, Clarence W
	2020	Clarence Murphy Melissa Murphy Melissa Rodgers
1330 Horan Lane	2014	Villelobas, Jennifer R
	2017	Landford, Virginia
1331 Horan Lane	2020	Dave Coleman
1335 Horan Lane	2010	Murphy, Chad C
	2014	Occupant Unknown
	2017	Robbin, Brandon
	2020	Allison Robbins Brandon Robbins
1414 Horan Lane	2005, 2014	Occupant Unknown
	2017, 2020	Brown, David A
1495 Horan Lane	2005, 2010, 2014	Occupant Unknown
	2017, 2020	Gribbins, Lee P
1500 Horan Lane	2005, 2014, 2017	Brown, Sylvester R
	2010	Hall, Alyson R
	2020	Alice Brown Sylvester Brown



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Subject/Adjoining Properties	Year	Listed Occupants
1660 Horan Lane	2005, 2010, 2014, 2017	Dedman, David L
	2020	David Dedman Mary Chesser Sharon Chesser Travis Chesser
1780 Horan Lane	2010	Derring, Steve
	2014, 2017	Deering, William S
	2020	Steve Derring William Derring
1930 Horan Lane	2005	Mattingly, BJ
	2010, 2014	Smith, Ronald
	2017	Fournier, Gilles
	2020	Phyllis Fournier
1944 Horan Lane	2010, 2017, 2020	Mattingly, David A
2700 Barbers Mill Road	2000	Medley, Frances
	2010, 2014	Occupant Unknown
2737 Barbers Mill Road	2014	Occupant Unknown
	2017	Jacobs, Marian
	2020	Marian Jacobs Mason Wilson
2740 Barbers Mill Road	2005	Donahue, Frank W
	2010, 2014	Cook, Chris E
	2017, 2020	Cook, Christopher A
2769 Barbers Mill Road	2010	Hamilton, Dana D
	2020	Dana Hamilton Mary Hamilton
2793 Barbers Mill Road	2014, 2020	Gootee, Kimberly A
	2017	Hazelwood, Curtis L
2794 Barbers Mill Road	2010	Gootee, Kimberly A
2825 Barbers Mill Road	2010	Erchak, Teri L
	2014, 2017	Erchak, Nicholas A
	2020	Nicholas Erchak



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Subject/Adjoining Properties	Year	Listed Occupants
		Teri Erchak
2860 Barbers Mill Road	1995, 2000, 2005	Hardin, Todd
	2010	Hardin, William T
	2014	Followell, Kenneth M
	2017	Followell, Amanda L
	2020	Amanda Followell Kenneth Followell
2861 Barbers Mill Road	2000	Occupant Unknown
2879 Barbers Mill Road	2010, 2014	Singleton, Nicole M
	2017	Huff, Phillip G
	2020	Nicole Huff Nicole Singleton Phillip Huff
2899 Barbers Mill Road	2005, 2010, 2014, 2017	Tucker, Robert A
	2020	Mary Tucker Scott Wodd Terri Tungate Theresa Tucker
2925 Barbers Mill Road	2010, 2014, 2017, 2020	Fields, Cam L
2960 Barbers Mill Road	1995, 2000	Hayes, Robert A
	2005	Hayden, Robert
	2010, 2014, 2017	Greenwell, Daniel P
	2020	Becky Greenwell
3115 Barbers Mill Road	2010	Bickett, Christopher B
	2014	Curtsinger, Marion L
	2017, 2020	Hill, James B
3145 Barbers Mill Road	2010, 2014	Occupant Unknown
3225 Barbers Mill Road	2017, 2020	Beckley, Donna
3237 Barbers Mill Road	2020	Crystal Wright Judy Keeling



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Subject/Adjoining Properties	Year	Listed Occupants
3325 Barbers Mill Road	2000	Harmon, Robert E
	2005, 2010	Obryan, Tammy L
	2014, 2017	Abell, Douglas S
	2020	Douglas Abell Joan Abell Scott Abell
3415 Barbers Mill Road	2005, 2010, 2014	Clark, Andrew C
	2020	Alice Clark Andrew Clark

The EDR-City Directory Image Report, Inquiry #7566597.5, February 14, 2024.

No RECs were noted during the review of the City Directories.

4.4.4 Historical Fire Insurance Maps

Fire insurance maps were developed for use by insurance companies to depict facilities, properties, and their uses for many locations throughout the United States. These maps provide information on the history of prior land use and are useful in assessing whether there may be potential environmental contamination on or near the Subject Property. These maps, which have been periodically updated since the late 19th century, often provide valuable insight into historical Subject Property and adjoining and nearby property uses.

Stantec requested fire insurance maps from Environmental Data Resources, Inc (EDR); however, no coverage exists for the Subject Property. The Sanborn® Map Search Report indicating “no coverage” is presented in Appendix E.

Certified Sanborn® Map Report, Inquiry Number 7566597.2, February 12, 2024.

No RECs were noted during the review of the Sanborn® maps.

4.4.5 Historical Topographic Maps

Stantec reviewed historical USGS 7.5-minute Topographic Maps of Lebanon East, Lebanon West, Springfield, and Saint Catharine (scale 1:24,000) to help identify past Subject Property and adjoining and nearby property usage and areas of potential environmental concern. Copies of the historical maps are provided in Appendix E.

The following table summarizes the maps reviewed and our observations.



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Records Review
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Year	Scale	Observations of Subject Property and Adjoining/Nearby Properties
1953	1" = 24,000'	Lebanon is visible to the southwest from the Subject Property. There are several named streams visible including Buck Branch, Cartwright Creek, and Casey Branch. State Route 55 is visible running north south. The Louisville Nashville Railroad line is running parrel to State route 52. There are a few other roads in the area including Gene Campbell Road and Simstown road.
1972	1" = 24,000'	Most of the Project Area is unmapped. Lebanon Springfield Airport is visible adjacent to State Route 55 just north of the Washington/Marion County line. Logan Branch Creek and the town of Simstown are also visible.
1979	1" = 24,000'	Most of the Project Area is unmapped. Cartwright Creek, Servant Run, and Logan Branch are visible. The Lebanon Springfield Airport is visible along with part of State Route 55.
2013	1" = 24,000'	Lebanon has expanded slightly. The Lebanon-Springfield Airport has been improved and expanded. Horan Lane, Radio Station Road, and Green Valley Road all run though the Subject Property. There are no other noticeable improvements around the Subject Property.
2016	1" = 24,000'	There are a few improvements of small side roads but no other noticeable changes from the previous topo map.
2019	1" = 24,000'	There is no noticeable change from the previous topo map.
2022	1" = 24,000'	There is no noticeable change from the previous topo map.

EDR Historical Topographic Map Report, Inquiry Number 7566597.1, February 14, 2024

No RECs were noted during the review of the topographic maps.

4.4.6 Other Historical Sources

No other historical sources were researched.



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Site Reconnaissance
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5.0 SITE RECONNAISSANCE

A visit to the Subject Property and its vicinity was conducted by Lucas Downs and Marissa Angel on January 30-31, 2024. Stantec was unaccompanied during the Subject Property visit. Figure 2 provides information about the Subject Property and adjoining sites and the location of potential areas of environmental concern. Detailed Subject Property features are shown on Figure 2. Photographs collected during the site reconnaissance are included in Appendix A.

5.1 SITE RECONNAISSANCE METHODOLOGY

The site reconnaissance focused on observation of current conditions and observable indications of past uses and conditions of the Subject Property that may indicate the presence of RECs. The reconnaissance of the Property was conducted on foot and Stantec utilized the following methodology to observe the Property:

- Traverse the outer Subject Property boundary
- Traverse transects across the Subject Property
- Traverse the periphery of all structures on the Subject Property
- Visually observe accessible interior areas expected to be used by occupants or the public maintenance and repair areas, utility areas, and a representative sample of occupied spaces

Weather conditions during the visit to the Subject Property were clear and sunny. There were no weather-related Subject Property access restrictions encountered during the reconnaissance visit.

5.2 GENERAL DESCRIPTION

<p>Subject Property and Area Description:</p>	<p>The Subject Property is located approximately 2.5 miles northeast of Lebanon, Kentucky. The Subject Property is intersected by Horan Lane, Barbers Mill Road, and Gene Campbell Road. Simstown Road makes up the northern boundary of the Subject Property and Springfield Road (KY-55) makes of the western boundary. The Subject Property is rural and comprised primarily of agricultural land mainly comprised of cattle. There are several small, forested areas throughout the Subject Property.</p>
<p>Subject Property Operations:</p>	<p>Most parcels are currently being used for agriculture, mainly cattle pasture. There are a few patches of forested area throughout the Subject Property.</p>
<p>Structures, Roads, Other Improvements:</p>	<p>There are twelve residential houses varying in age and size. There are twenty-eight barns used for storage of farm equipment and/or cattle. There are no roads on the Subject Property but Horan Lane and Gene Campbell Road run though the area.</p>



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Site Reconnaissance
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Subject Property Size (acres):	2,177.49 acres
Estimated % of Subject Property Covered by Buildings and/or Pavement:	Less than 1%
Observed Current Subject Property Use/Operations:	Agricultural and Forested
Observed Evidence of Past Subject Property Use(s):	Agricultural and Forested
Sewage Disposal Method (and age):	N/A
Potable Water Source:	N/A
Electric and Natural Gas Utilities:	N/A

5.3 HAZARDOUS SUBSTANCES AND PETROLEUM PRODUCTS

The following table summarizes Stantec’s observations during the Subject Property reconnaissance.

Observations	Description/Location
Hazardous Substances and Petroleum Products as Defined by CERCLA 42 U.S.C. § 9601(14) with identified uses:	<p>Parcel 026-020 contained a 150-gallon diesel AST on a pull behind trailer and two 1,000-gallon ASTs that were rusted and empty. There was no staining or stressed vegetation observed. Parcel 026-020 also contained a 500-gallon diesel tank that had stressed vegetation and an odor.</p> <p>Parcel 070-035 contained a 500-gallon propane tank.</p> <p>Parcel 064-002 contained a 500-gallon diesel AST, no staining or stressed vegetation observed.</p> <p>Parcel 070-007 contained a 500-gallon diesel AST, no staining or stressed vegetation observed.</p> <p>Parcel 064-001A contained a 500-gallon diesel AST, no staining or stressed vegetation observed.</p> <p>Parcel 063-017 contained a 150-gallon diesel AST, no staining or stressed vegetation observed.</p> <p>Parcel 835302691 contained an approximately 10,000-gallon AST with unknown contents.</p>



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Site Reconnaissance
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Observations	Description/Location
Drums/Totes/Intermediate Bulk Containers (≥ 5 gallons):	Parcel 070-035 contained two 55-gallon drums that were empty and not in use.
Strong, Pungent, or Noxious Odors:	A 500-gallon diesel AST was observed on parcel 026-020, there was an odor present.
Pools of Liquid:	None observed
Unidentified Substance Containers:	None observed
Polychlorinated biphenyl (PCB)-Containing Equipment:	There were twenty Pole mounted transformers observed on or directly adjacent to the Subject Property. Of those twenty, nine are assumed to contain PCB due to the lack of the “No PCB” label. Eight of those PCB containing transformers are located on parcels 063-015, 064-001A, 064-002, 070-035, 026-020, 070-007, 070-001, and 070-017-04. The remaining PCB containing transformer is directly adjacent to parcel 063-017.
Other Observed Evidence of Hazardous Substances or Petroleum Products:	None observed.

5.4 INTERIOR OBSERVATIONS

Stantec made the following observations during the site reconnaissance of the building interiors at the Subject Property and/or identified the following information during the interview or records review portions of the assessment:

Observations	Description
Heating/Cooling Method:	No heating/cooling methods observed. Stantec did not enter the residences on parcels throughout the Subject Property.
Surface Stains or Corrosion:	None observed.
Floor Drains and Sumps:	None observed.
Other Interior Observations:	None observed.

5.5 EXTERIOR OBSERVATIONS

Stantec made the following observations during the site reconnaissance of exterior areas of the Subject Property and/or identified the following information during the interview or records review portions of the assessment:

Observations	Description
On-site Pits, Ponds, or Lagoons:	None observed
Stained Soil or Pavement:	None observed.



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Site Reconnaissance
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Observations	Description
Stressed Vegetation:	Below a 500-gallon diesel AST on parcel 026-020 there were signs of stressed vegetation.
Waste Streams and Waste Collection Areas:	None observed.
Solid Waste Disposal:	No areas indicative of solid waste disposal were observed.
Potential Areas of Fill Placement:	No mounds, piles, or depressions suggesting the placement of fill material were observed on the Subject Property.
Wastewater:	No exterior wastewater discharge was observed.
Stormwater:	None observed.
Wells:	Several hand pump water wells were observed on parcels 063-015, 064-001A, 063-017, 063-021, 063-017, 070-007, and 070-001.
Septic Systems:	No visible evidence of the existence of a septic system was observed.
Other Exterior Observations:	None observed.

5.6 UNDERGROUND STORAGE TANKS/STRUCTURES

Existing USTs:	No visible evidence (fill pipes, vent pipes, dispensers, surface patches), which would indicate the presence of USTs, was discovered during the site reconnaissance.
Former USTs:	No visible evidence (fill pipes, vent pipes, dispensers, surface patches), reports, or other evidence of the former presence of USTs was discovered during this Phase I ESA.
Other Underground Structures:	None observed.

5.7 ABOVEGROUND STORAGE TANKS

Existing ASTs:	<p>Parcel 026-020 contained a 150-gallon trailer diesel AST and two 1,000-gallon AST that were rusted and empty. There was no staining or stressed vegetation observed. Parcel 026-020 also contained a 500-gallon diesel tank that had stressed vegetation and an odor.</p> <p>Parcel 070-035 contained a 500-gallon propane tank.</p> <p>Parcel 064-002 contained a 500-gallon diesel AST, no staining or stressed vegetation observed.</p>
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	<p>Parcel 070-007 contained a 500-gallon diesel AST, no staining or stressed vegetation observed.</p> <p>Parcel 064-001A contained a 500-gallon diesel AST, no staining or stressed vegetation observed.</p> <p>Parcel 063-017 contained a 150-gallon diesel AST, no staining or stressed vegetation observed.</p> <p>Parcel 835302691 contained an approximately 10,000-gallon AST with unknown contents.</p>
Former ASTs:	No visible evidence (fill pipes, vent pipes, dispensers, surface stains), reports, or other evidence of the former presence of ASTs was discovered during this Phase I ESA.

5.8 ADJOINING PROPERTIES

5.8.1 Current Uses of Adjoining Properties

As viewed from the Subject Property and/or from public rights-of-way, Stantec made the following observations about use and activities on adjoining sites:

NORTH	These properties appear to be used for agriculture with some forested areas and dispersed residential houses.
EAST	These properties appear to be used for agriculture with some forested areas and dispersed residential houses.
SOUTH	These properties appear to be used for agriculture with some forested areas and dispersed residential houses.
WEST	These properties appear to be used for agriculture with some forested areas and dispersed residential houses.

Refer to Figure 2

5.8.2 Observed Evidence of Past Uses of Adjoining Properties

Observations of adjoining sites providing indications of past use and activities, if any, are described below.

NORTH	None observed.
EAST	None observed.
SOUTH	None observed.
WEST	None observed.



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5.8.3 Pits, Ponds, or Lagoons on Adjoining Properties

As viewed from the Subject Property and/or from public rights-of-way, Stantec made the following observations about the presence of pits, ponds, and lagoons on adjoining sites:

NORTH	None observed
EAST	None observed
SOUTH	None observed
WEST	None observed

5.9 OBSERVED PHYSICAL SETTING

Topography of the Subject Property and Surrounding Area:	The Subject Property has undulating topology. There were no significant changes in elevation but across the Subject Property there was close to 200 feet of relief.
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Interviews
February 21, 2024

6.0 INTERVIEWS

Stantec conducted interviews with the following individuals:

Name, Contact Information, and Date of Interview	Relationship to Subject Property	Key findings:
Eugene & Cynthia Campbell	Owner	Eugene & Cynthia Campbell have occupied their 65 acres of land for 38 years. They have no record of any environmental hazards, and the previous property use was agricultural.
Clarence W. Murphy, Jr of Elaine Murphy Trust	Farm Manager & Trustee	Clarence Murphy, Jr has lived on this land for approximately 3 years but has grown up on the farm and spent a good majority of time on the 50 acres. There has been a stock and tobacco barn since the early 50s. He had no record of any environmental hazards on the property.
Clarence W. Murphy, Jr of Murphy Family Trust	Farm Manager & Trustee	The Murphy Family trust has approximately 450 +/- acres of land since 1943. Clarence W. Murphy, Jr lives on the property for the past three years but grew up on the farm. There is a house and garage as well as a barn and garage all being built in the early 80s. Both areas had septic tanks but are no longer in use. He had no record of any environmental hazards on the property.
Clarence W. Murphy, Jr	Owner	Clarence Jr & Melissa Murphy are the owners of approximately 13 acres since 2000. The land has been owned by family since the 1960s. The property has always been used for residential and agricultural purposes and has a House (1970s) Garage (2008), Barn (1950s), and a small stock barn (1950s). There is no record of any



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		environmental hazards on the property.
Charles & Paula Brussell	Owner	Charles & Paula Brussell have occupied their 54 acres of land for 20 years. The previous property use was agricultural. They have no records of any environmental hazards.
James W. & Aileen B. Thompson	Owner/Manager	Jimmy Thompson have owned the 65 acres of land since 2008. The previous land use was a dairy farm. There is a metal building (2009), hay shed (2012), a hoop barn (2014), and calf feeder shed (2018) on the property. There is a well near the hay shed that is no longer in use. There is an above ground 150-gallon diesel fuel tank near the metal building for farm use. There are no records of any environmental hazards.

Copies of interview documentation are provided in Appendix G.



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Evaluation
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7.0 EVALUATION

This section provides a summary overview of or Findings, Opinions, and Conclusions.

7.1 FINDINGS AND OPINIONS

Information gathered from interviews, reviews of existing data, and an inspection was evaluated to determine if RECs are present in connection with the Subject Property. Based on this information, Stantec made the following findings and developed the following opinions.

- Twenty pole mounted transformers found on or adjacent to parcels across the entire Subject Property. Nine of the twenty transforms are assumed to contain PCBs. No staining or leaking was observed under these transformers and their presence is not considered a REC.
- The EDR Area report revealed a non-PCB mineral oil spill at the Lebanon Transformer station adjacent to parcel 064-001A, 064-001B, and 063-015. Due to the proper documentation of the cleanup, this site has been determined to not be a REC for the Subject Property.
- During the site reconnaissance, nine ASTs, two 55-gallon drums, a propane tank, and a few debris piles were observed.

A 500-gallon diesel AST was observed on parcel 026-020. Below the tank were signs of stressed vegetation and there was an odor noted. The stressed vegetation is likely due to being covered by the AST rather than a release to the surrounding soil. No soil staining was observed. Due to the lack of soil staining this finding is considered *de minimus*. The remaining seven ASTs showed no signs of leaking and are not considered RECs.

There was a 500-gallon propane tank used for residential purposes as well as two empty 55-gallon drums found on Parcel 070-035. These items are not considered a REC.

There were a few small piles of debris and tires in the stream bank on Parcel 070-005. The improper solid waste disposal these sites are considered *de minimis* and do not pose a risk to the Subject Property.

- Former agricultural use was identified at the Property; the Property was developed for agricultural use prior to 1951 and has continued to be used for this purpose. It is possible that various pesticides, herbicides, and fertilizers have been used at the Property.
 - No documentation of violations or improper application of agricultural chemicals was identified in the records reviewed. Stantec did not identify apparent agricultural chemical processing areas, such as crop-dusting airfields, bulk mixing areas; or repacking, transfer, or agricultural chemical storage areas in the aerial photographs that were reviewed during this ESA. Due to former agricultural use, the potential for residual impacts of historic agricultural chemicals exists and should be considered in planning for



NORTHERN BOBWHITE SOLAR, PHASE I ENVIRONMENTAL SITE ASSESSMENT

Evaluation
February 21, 2024

redevelopment and end use for the Property. The lack of violations or evidence of improper application does not indicate a REC.

7.2 DATA GAPS

The federal AAI final rule [40 CFR 312.10(a)] and ASTM E2247-16 identify a “data gap” as the lack or inability to obtain information required by the standards and practices of the rule despite good faith efforts by the EP or the User.

Any data gaps resulting from the Phase I ESA described in this report are listed and discussed below.

Gap	Discussion
Deletions or Exceptions from Scope of Work Referenced in Section 1.4:	None
Weather-Related Restrictions to Site Reconnaissance:	None
Facility Access Restrictions to Site Reconnaissance:	Stantec did not enter any residences across the Subject Property, but this is not considered a significant data gap.
Other Site Reconnaissance Restrictions:	None
Data Gaps from Environmental Records Review:	None
Data Gaps from Historical Records Review:	None
Data Gaps from Interviews:	None
Other Data Gaps:	None

7.3 CONCLUSIONS

We have performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E1527-21 of Northern Bobwhite Solar, the Subject Property. Any exceptions to, or deletions from, this practice are described in Section 2.3 of this report. This assessment has revealed no RECs in connection with the Subject Property:



NORTHERN BOBWHITE SOLAR, PHASE I ENVIRONMENTAL SITE ASSESSMENT

Non-Scope Considerations
February 21, 2024

8.0 NON-SCOPE CONSIDERATIONS

The scope of work completed was limited solely to those items in the ASTM E2247-16 standard. No ASTM E1547-16 defined "Non-Scope Considerations" were performed as part of this Phase I ESA.



NORTHERN BOBWHITE SOLAR, PHASE I ENVIRONMENTAL SITE ASSESSMENT

References
February 21, 2024

9.0 REFERENCES

ASTM International, 2023, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process for Forestland or Rural Property, Designation: E 1527-13.

ASTM International, 2022, Standard Guide for Vapor Encroachment Screening on Subject Property Involved in Real Estate Transactions, Designation E 2600-22.

EDR Aerial Photo Decade Package, Inquiry #7566597.4, February 13, 2024.

EDR Certified Sanborn Map Report, Inquiry Number 7566597.2, February 12, 2024.

EDR City Directory Image Report, Inquiry #7566597.5, February 14, 2024.

EDR DataMap™ Well Search Report, Inquiry # 7566597.8w, February 12, 2024.

EDR Historical Topographic Map Report, Inquiry Number 7566597.1, February 14, 2024.

EDR Area/Corridor Report, Inquiry Number 7566597.8s, February 13, 2024.

Kentucky Energy and Environment Cabinet. Notice of Completion Letter Option C (Restoration), February 12, 2019

Kentucky Geological Survey. 2012. Physiographic Map of Kentucky. Last updated: [August 1, 2012]. <https://www.uky.edu/KGS/geoky/physiographic.htm>. Accessed: February 2024.

NRCS Web Soil Survey, Soil Resource Report for Marion and Washington Counties, Kentucky, Web Soil Survey ([usda.gov](https://www.nrcs.usda.gov)), accessed February 2024.

Noger, M.C., compiler, 1988, Geologic map of Kentucky: sesquicentennial edition of the Kentucky Geological Survey: U.S. Geological Survey and the Kentucky Geological Survey, scale 1:500,000.

United States Geological Survey. 2023. <https://mrdata.usgs.gov/geology/state/map-us.html#place-picker> accessed February 2024.



FIGURES

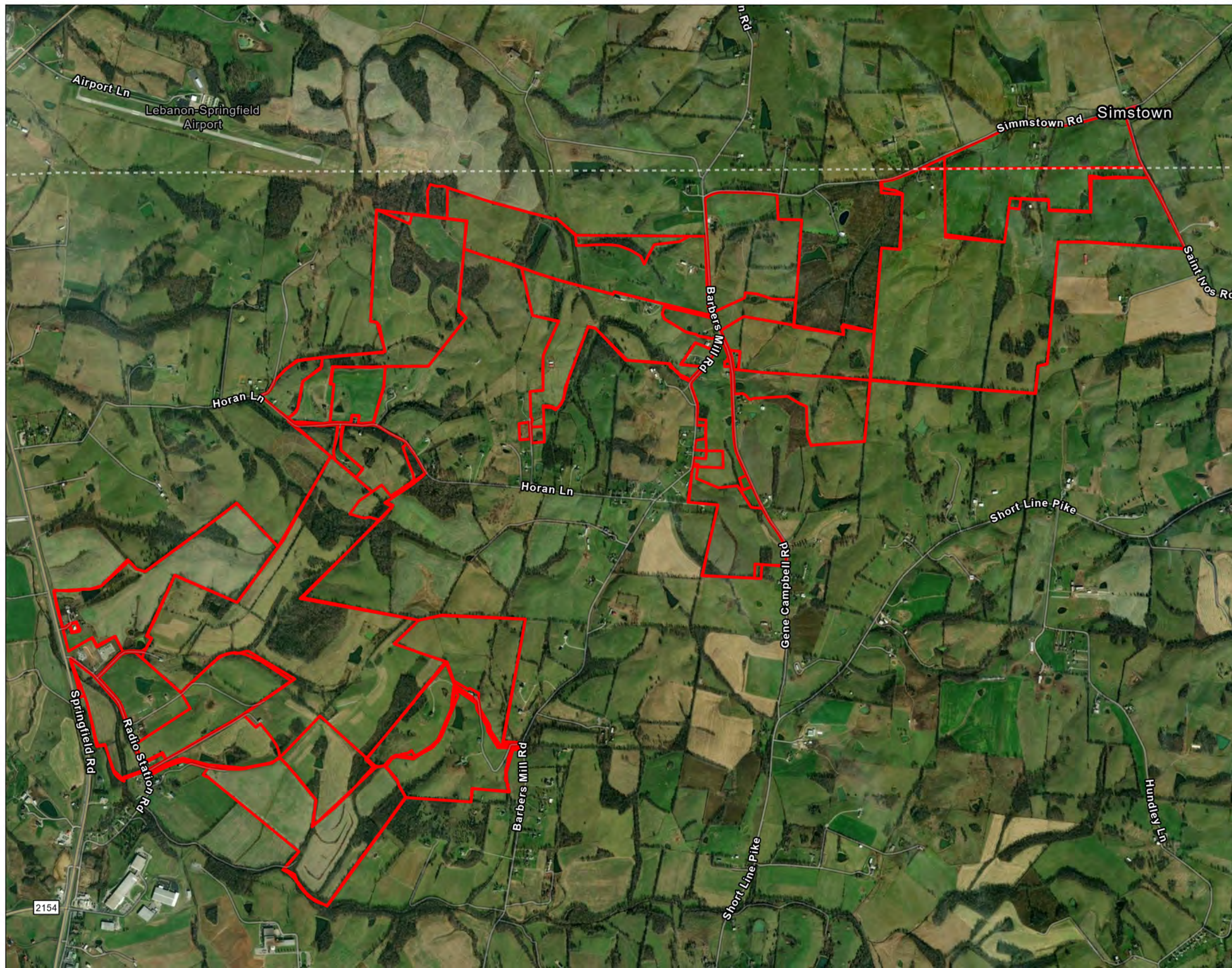


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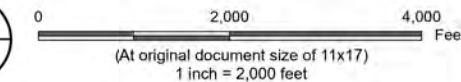
Subject Property Area Map

Client/Project
EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report

172607795

Project Location
Washington and Marion County,
Kentucky

Prepared by MNA on 2024-02-15
TR by KD on 2024-02-20
IR by SPK on 2024-02-20



Legend

Project Boundary



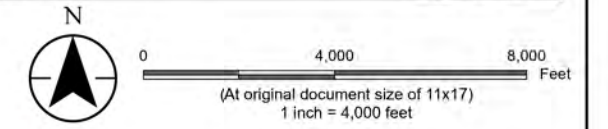
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 2. Data Sources: EDF Renewables Inc., Stantec
 3. Background: Esri Aerial Imagery Hybrid Basemap



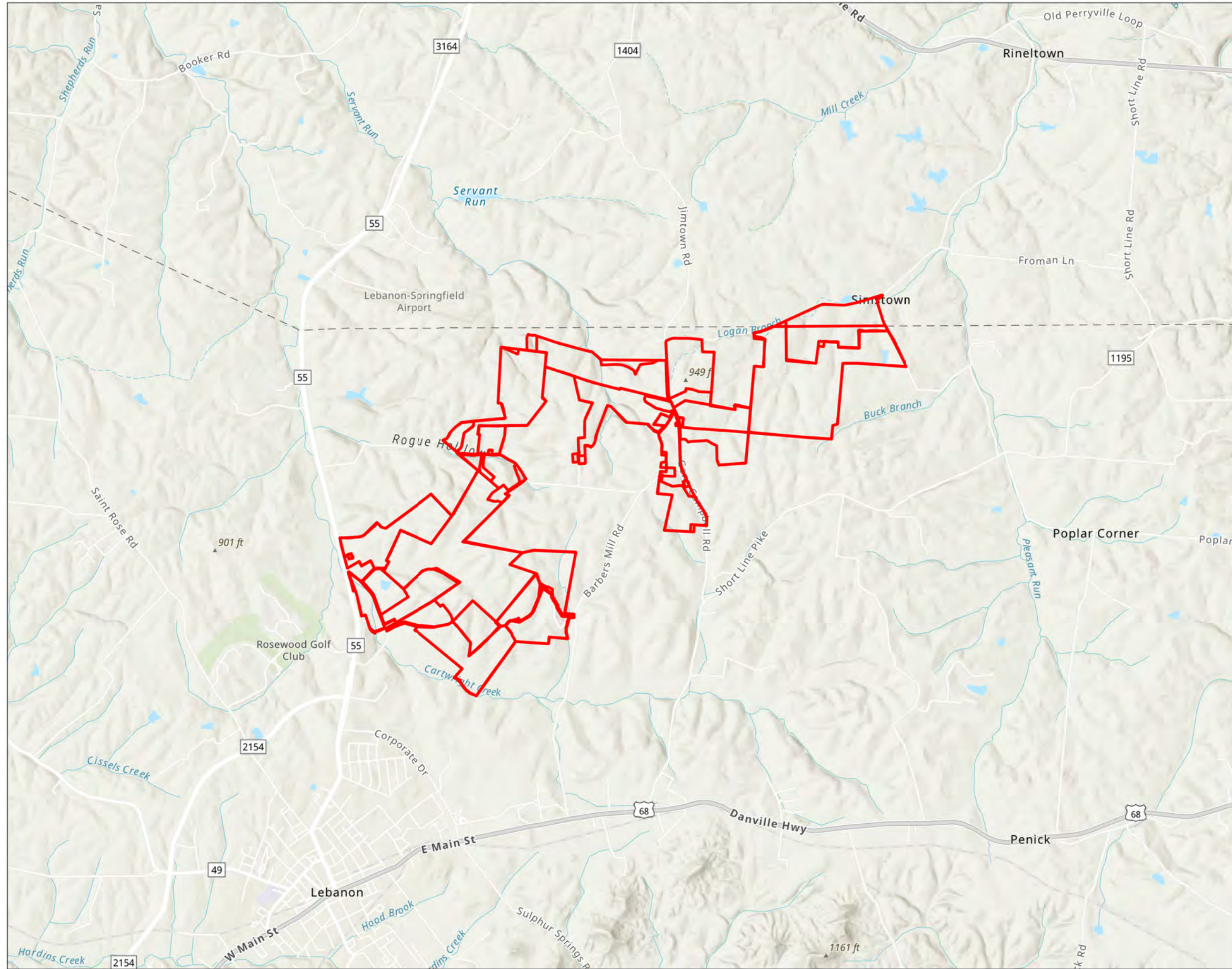
Figure No. **2**
Title **Subject Property Vicinity Map**

Client/Project: EDF Renewables Inc. 172807795
Northern Bobwhite Solar Project
Phase 1 ESA Report

Project Location: Washington and Marion County, Kentucky
Prepared by MNA on 2024-02-15
TR by KD on 2024-02-20
IR by SPK on 2024-02-20



Legend
 Project Boundary



Notes
 1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
 2. Data Sources: EDF Renewables Inc., Stantec
 3. Background: Esri Topographic Basemap



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Figure No.

3

Title

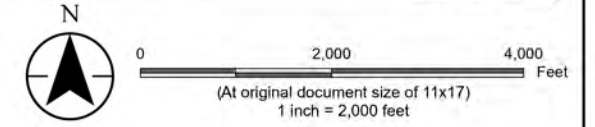
Subject Property Parcel Map

Client/Project
EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report

172607795

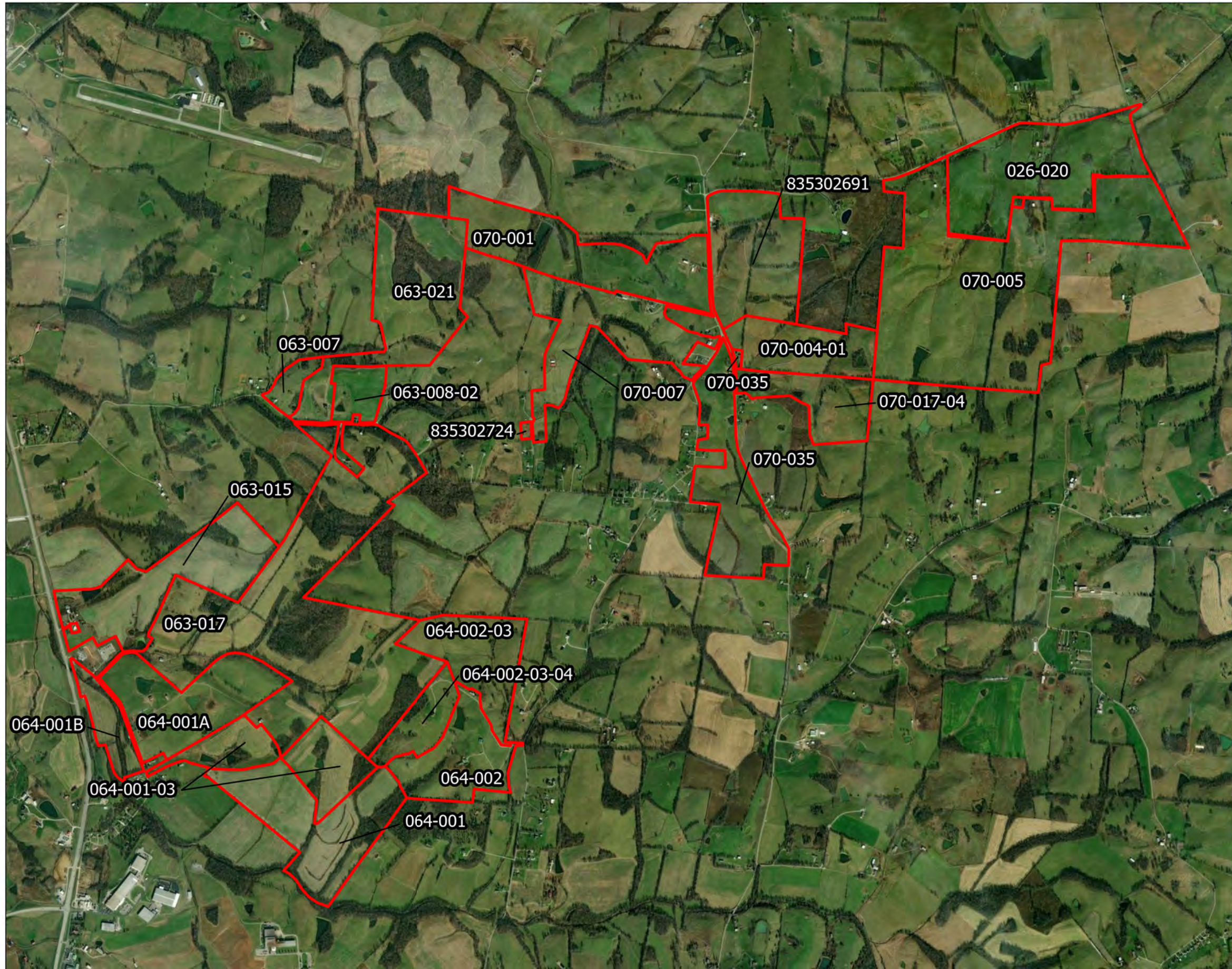
Project Location
Washington and Marion County,
Kentucky

Prepared by MNA on 2024-02-15
TR by KD on 2024-02-20
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Legend

 Project Parcels



Notes
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3. Background: Esri Aerial Imagery Basemap



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Figure No.

4.0

Title

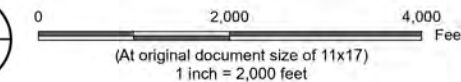
Subject Property Map

Client/Project
EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report



172607795

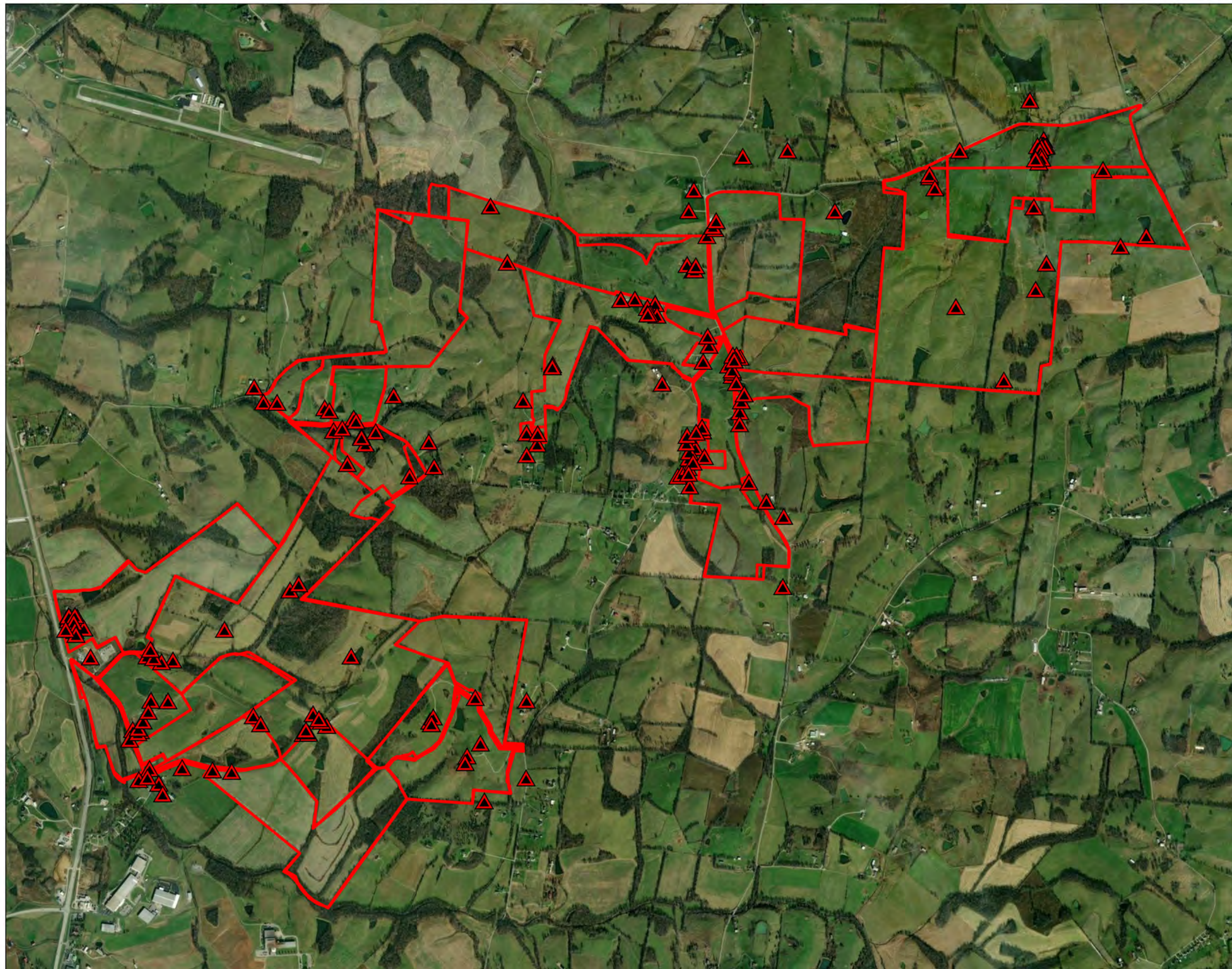
Project Location
Washington and Marion County,
Kentucky

Prepared by MNA on 2024-02-15
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Legend

-  Project Boundary
-  Phase 1 ESA Points



- Notes
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
 2. Data Sources: EDF Renewables Inc., Stantec
 3. Background: Esri Aerial Imagery Basemap



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Figure No.

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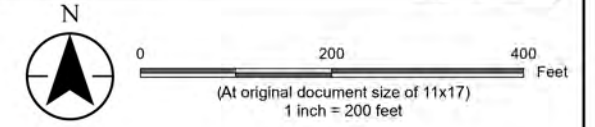
Subject Property Map

Client/Project
EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report

172607795

Project Location
Washington and Marion County,
Kentucky

Prepared by MNA on 2024-02-15
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Legend

- Project Boundary
- ▲ Phase 1 ESA Points



Notes
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2. Data Sources: EDF Renewables Inc., Stantec
3. Background: Esri Aerial Imagery Basemap



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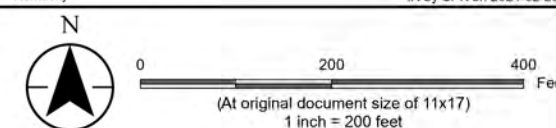
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Client/Project
EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report



172607795

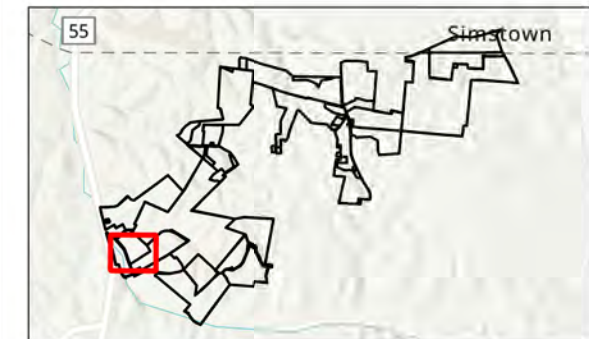
Project Location
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Kentucky

Prepared by MNA on 2024-02-15
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Legend

-  Project Boundary
-  Phase 1 ESA Points



- Notes
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
 2. Data Sources: EDF Renewables Inc., Stantec
 3. Background: Esri Aerial Imagery Basemap



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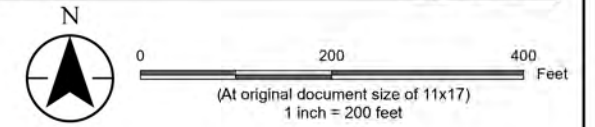
Subject Property Map

Client/Project
EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report



172607795

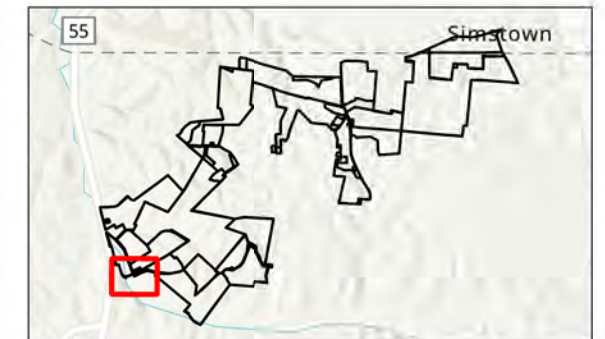
Project Location
Washington and Marion County,
Kentucky

Prepared by MNA on 2024-02-15
TR by KD on 2024-02-20
IR by SPK on 2024-02-20



Legend

-  Project Boundary
-  Phase 1 ESA Points



- Notes
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 2. Data Sources: EDF Renewables Inc., Stantec
 3. Background: Esri Aerial Imagery Basemap



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Figure No.

4.4

Title

Subject Property Map

Client/Project

EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report

172607795

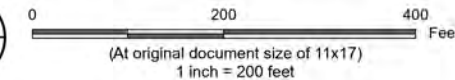
Project Location

Washington and Marion County,
Kentucky

Prepared by MNA on 2024-02-15


TR by KD on 2024-02-20

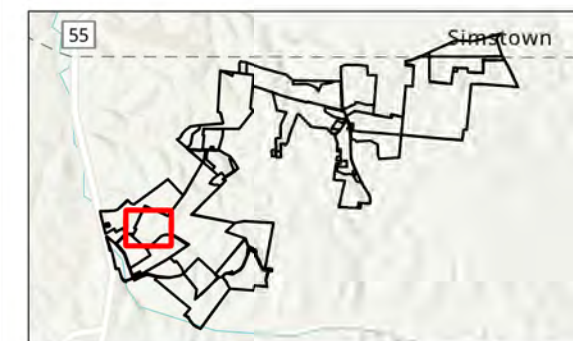
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Legend

 Project Boundary

 Phase 1 ESA Points



- Notes
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
 2. Data Sources: EDF Renewables Inc., Stantec
 3. Background: Esri Aerial Imagery Basemap



Figure No.

4.5

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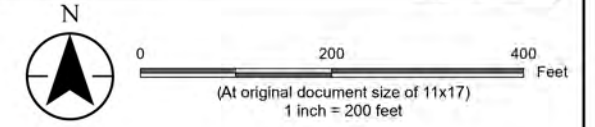
Subject Property Map

Client/Project
EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report

172607795

Project Location
Washington and Marion County,
Kentucky

Prepared by MNA on 2024-02-15
TR by KD on 2024-02-20
IR by SPK on 2024-02-20

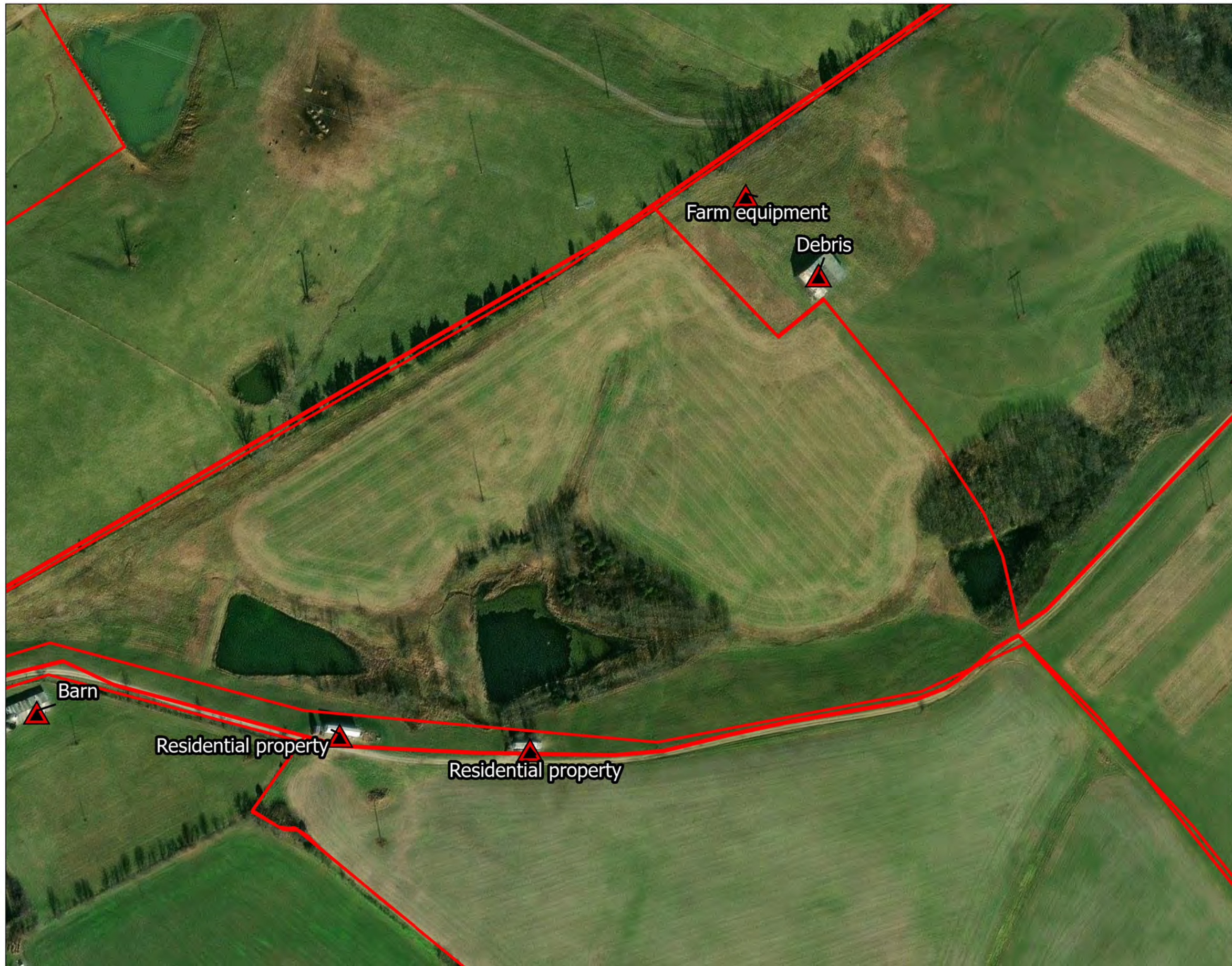


Legend

- Project Boundary
- ▲ Phase 1 ESA Points



- Notes
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
 2. Data Sources: EDF Renewables Inc., Stantec
 3. Background: Esri Aerial Imagery Basemap



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Figure No.

4.6

Title

Subject Property Map

Client/Project
EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report

172607795

Project Location
Washington and Marion County,
Kentucky

Prepared by MNA on 2024-02-15
TR by KD on 2024-02-20
IR by SPK on 2024-02-20

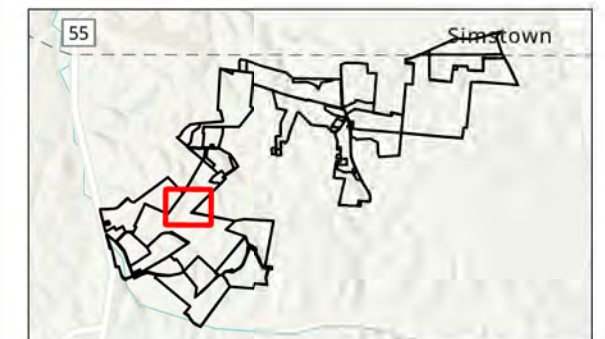


0 200 400 Feet
(At original document size of 11x17)
1 inch = 200 feet

Legend

Project Boundary

Phase 1 ESA Points



Notes
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2. Data Sources: EDF Renewables Inc., Stantec
3. Background: Esri Aerial Imagery Basemap





Figure No.

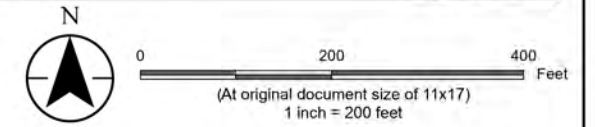
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Title



Subject Property Map

Client/Project 172607795
EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report

Project Location Prepared by MNA on 2024-02-15
Washington and Marion County, TR by KD on 2024-02-20
Kentucky IR by SPK on 2024-02-20



Legend

-  Project Boundary
-  Phase 1 ESA Points



- Notes
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
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 3. Background: Esri Aerial Imagery Basemap





Figure No.

4.8

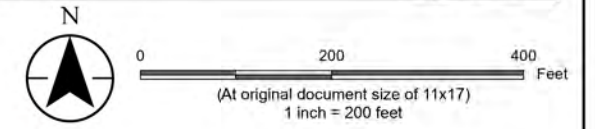
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Client/Project: EDF Renewables Inc. Northern Bobwhite Solar Project Phase 1 ESA Report

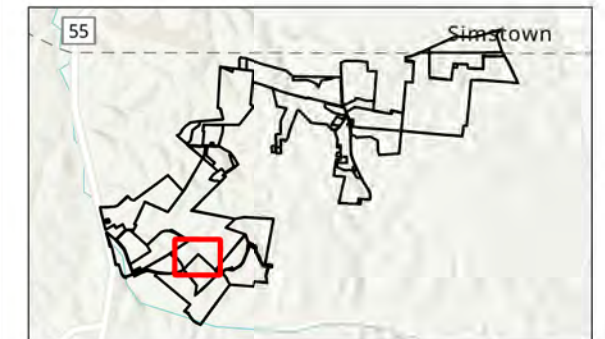
Project Location: Washington and Marion County, Kentucky

Prepared by MNA on 2024-02-15
TR by KD on 2024-02-20
IR by SPK on 2024-02-20



Legend

- Project Boundary
- ▲ Phase 1 ESA Points



- Notes
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
 2. Data Sources: EDF Renewables Inc., Stantec
 3. Background: Esri Aerial Imagery Basemap



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Figure No.

4.9

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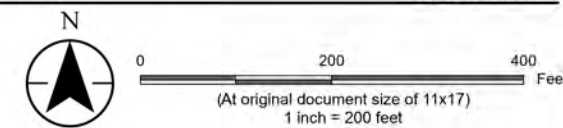
Subject Property Map

Client/Project
EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report



172607795

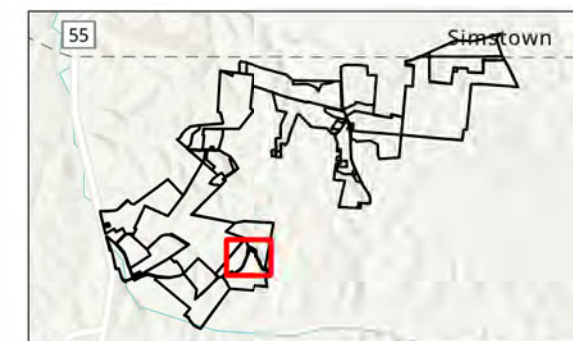
Project Location
Washington and Marion County,
Kentucky

Prepared by MNA on 2024-02-15
TR by KD on 2024-02-20
IR by SPK on 2024-02-20



Legend

-  Project Boundary
-  Phase 1 ESA Points



- Notes
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
 2. Data Sources: EDF Renewables Inc., Stantec
 3. Background: Esri Aerial Imagery Basemap



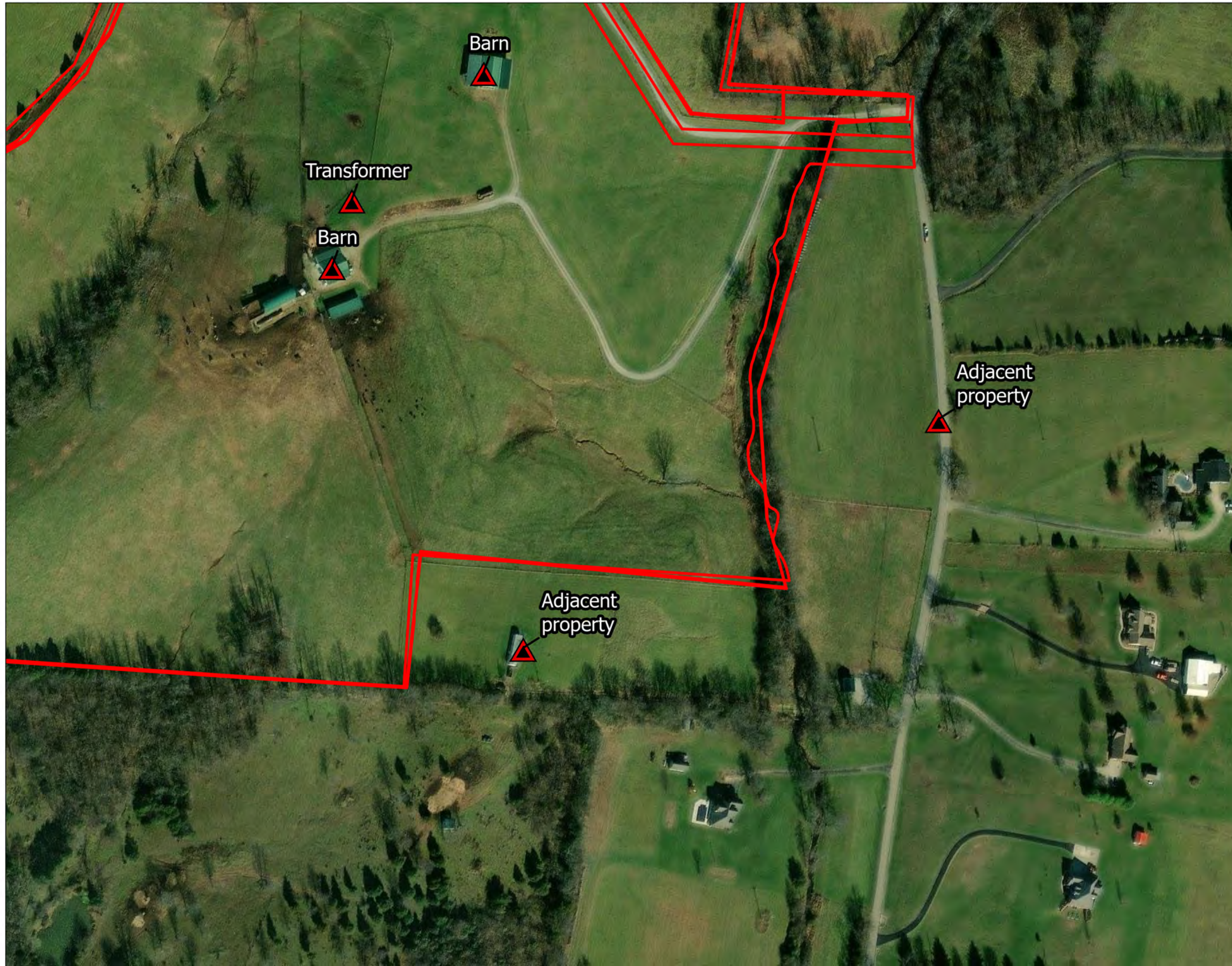


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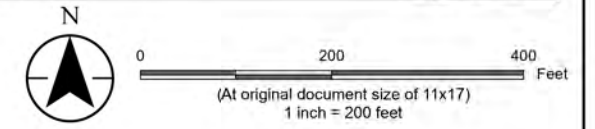
Subject Property Map

Client/Project
 EDF Renewables Inc.
 Northern Bobwhite Solar Project
 Phase 1 ESA Report

172607795

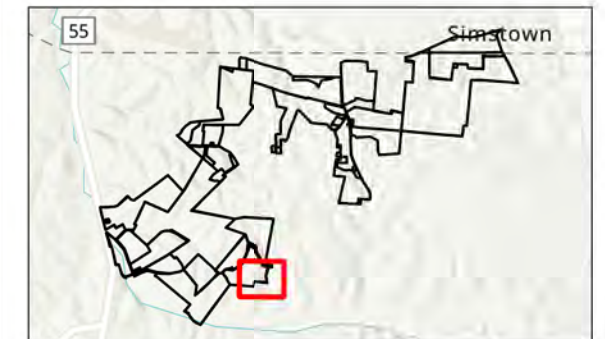
Project Location
 Washington and Marion County,
 Kentucky

Prepared by MNA on 2024-02-15
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Legend

- Project Boundary
- ▲ Phase 1 ESA Points



- Notes
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 3. Background: Esri Aerial Imagery Basemap

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4.11

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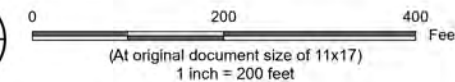
Subject Property Map

Client/Project
EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report

172607795


Project Location
Washington and Marion County,
Kentucky

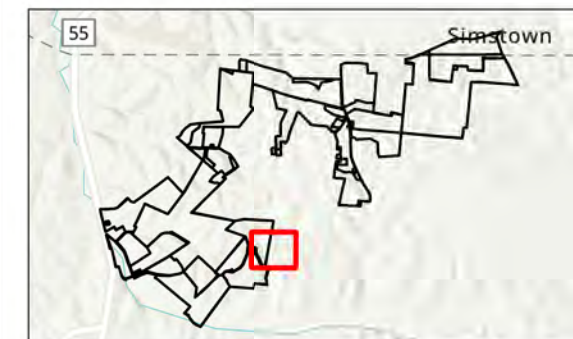
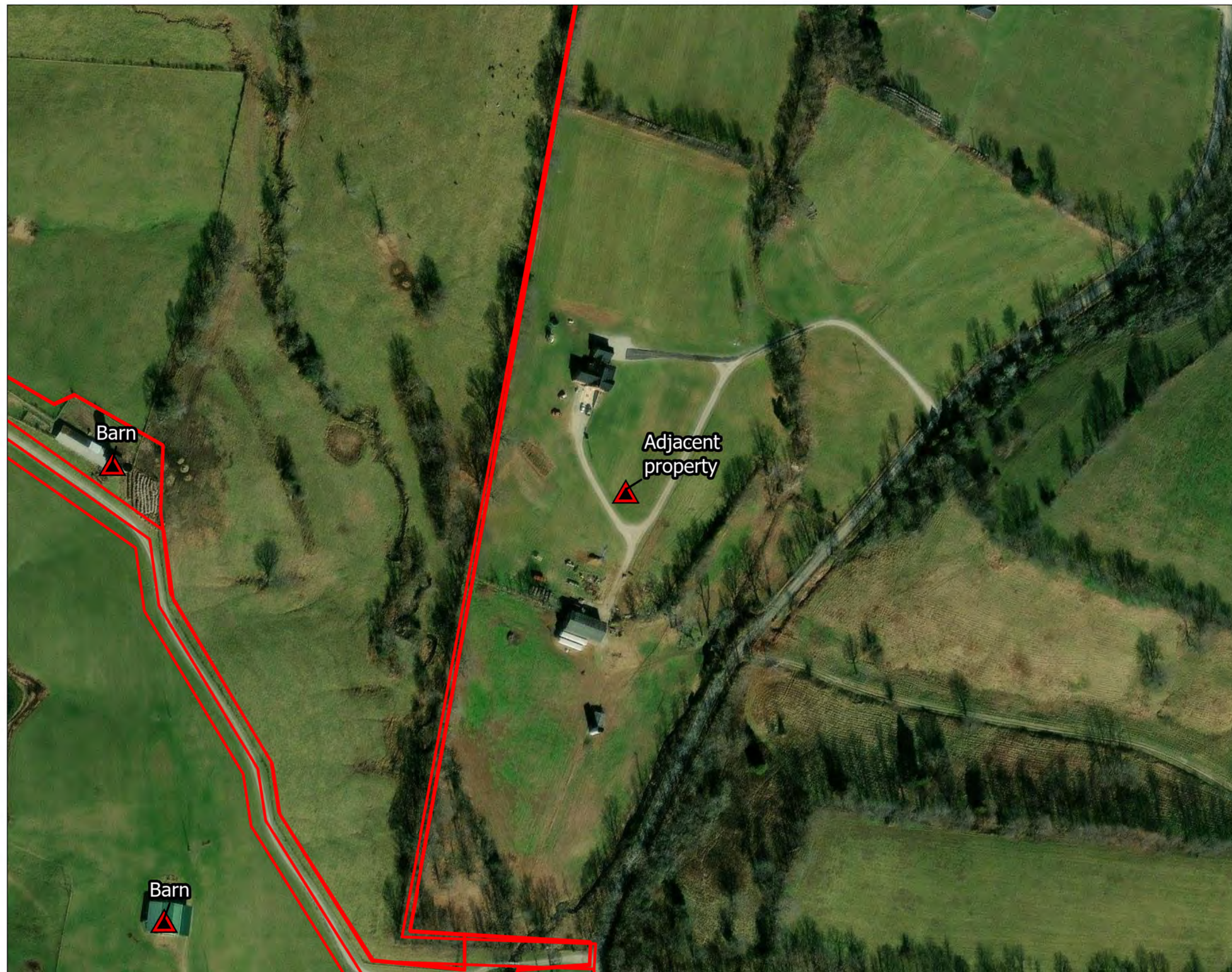
Prepared by MNA on 2024-02-15
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Legend

 Project Boundary

 Phase 1 ESA Points



Notes
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3. Background: Esri Aerial Imagery Basemap





Figure No.
4.12

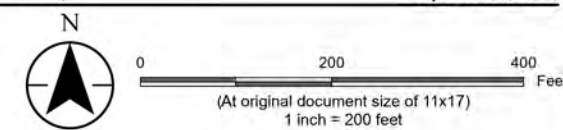
Title
Subject Property Map

Client/Project
EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report

172607795

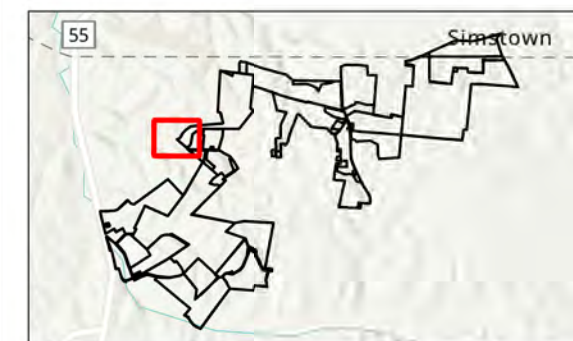
Project Location
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Legend

- Project Boundary
- ▲ Phase 1 ESA Points



- Notes
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Figure No.

4.13

Title

Subject Property Map

Client/Project

EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report

172607795

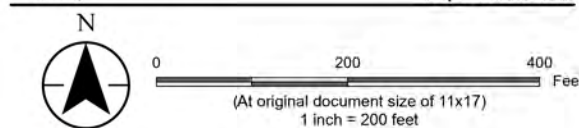
Project Location

Washington and Marion County,
Kentucky

Prepared by MNA on 2024-02-15

TR by KD on 2024-02-20

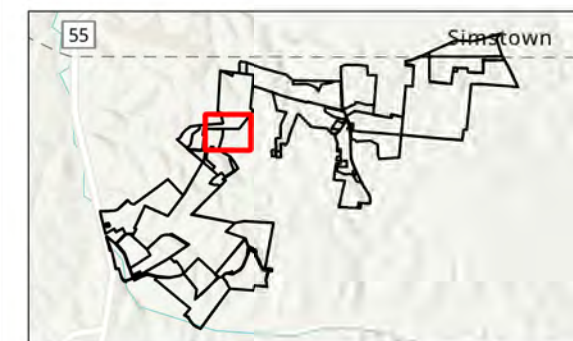
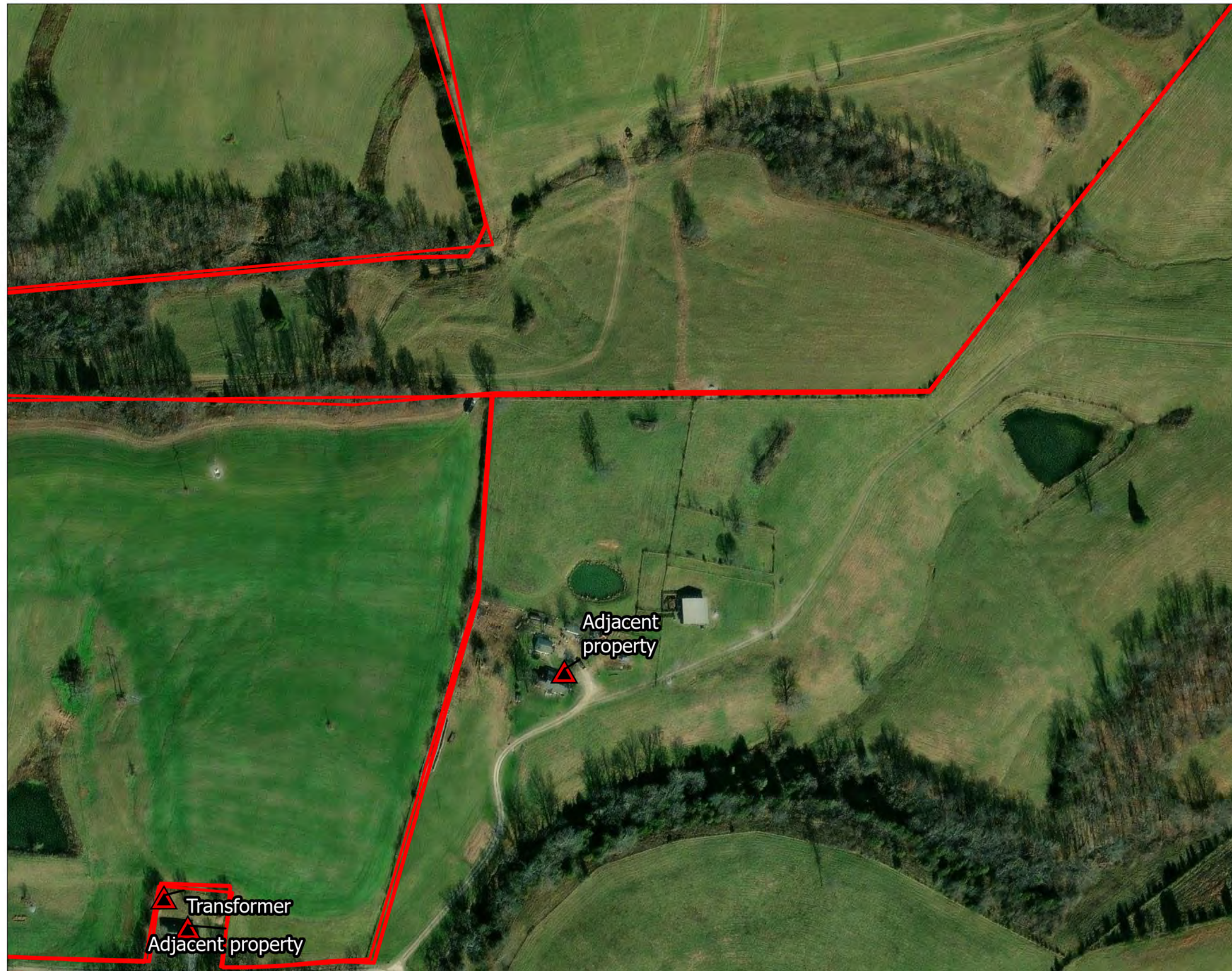
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Legend

Project Boundary

Phase 1 ESA Points



- Notes
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
 2. Data Sources: EDF Renewables Inc., Stantec
 3. Background: Esri Aerial Imagery Basemap



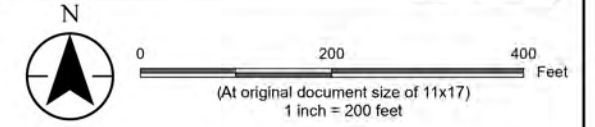
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4.14

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Subject Property Map

Client/Project
EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report

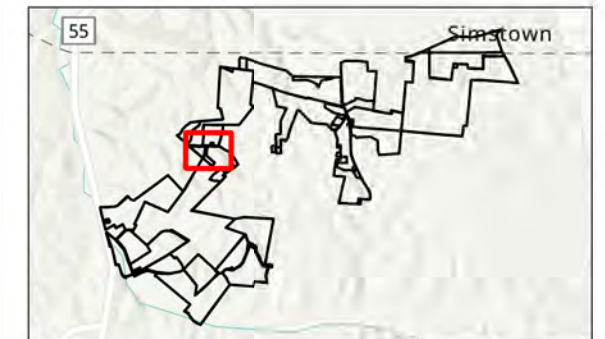
Project Location
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Legend

- Project Boundary
- ▲ Phase 1 ESA Points



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Figure No.

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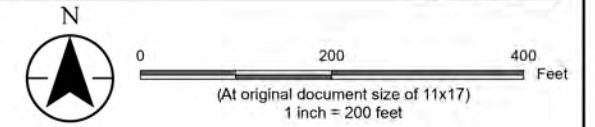
Subject Property Map

Client/Project
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Northern Bobwhite Solar Project
Phase 1 ESA Report



172607795

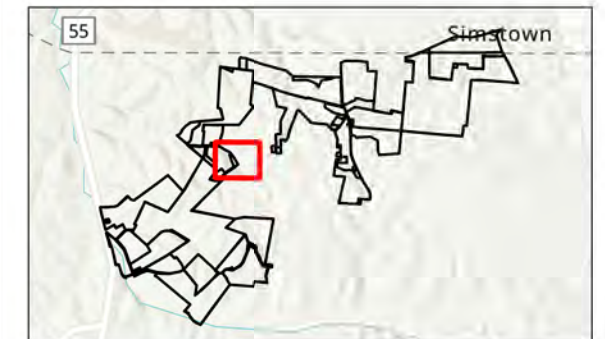
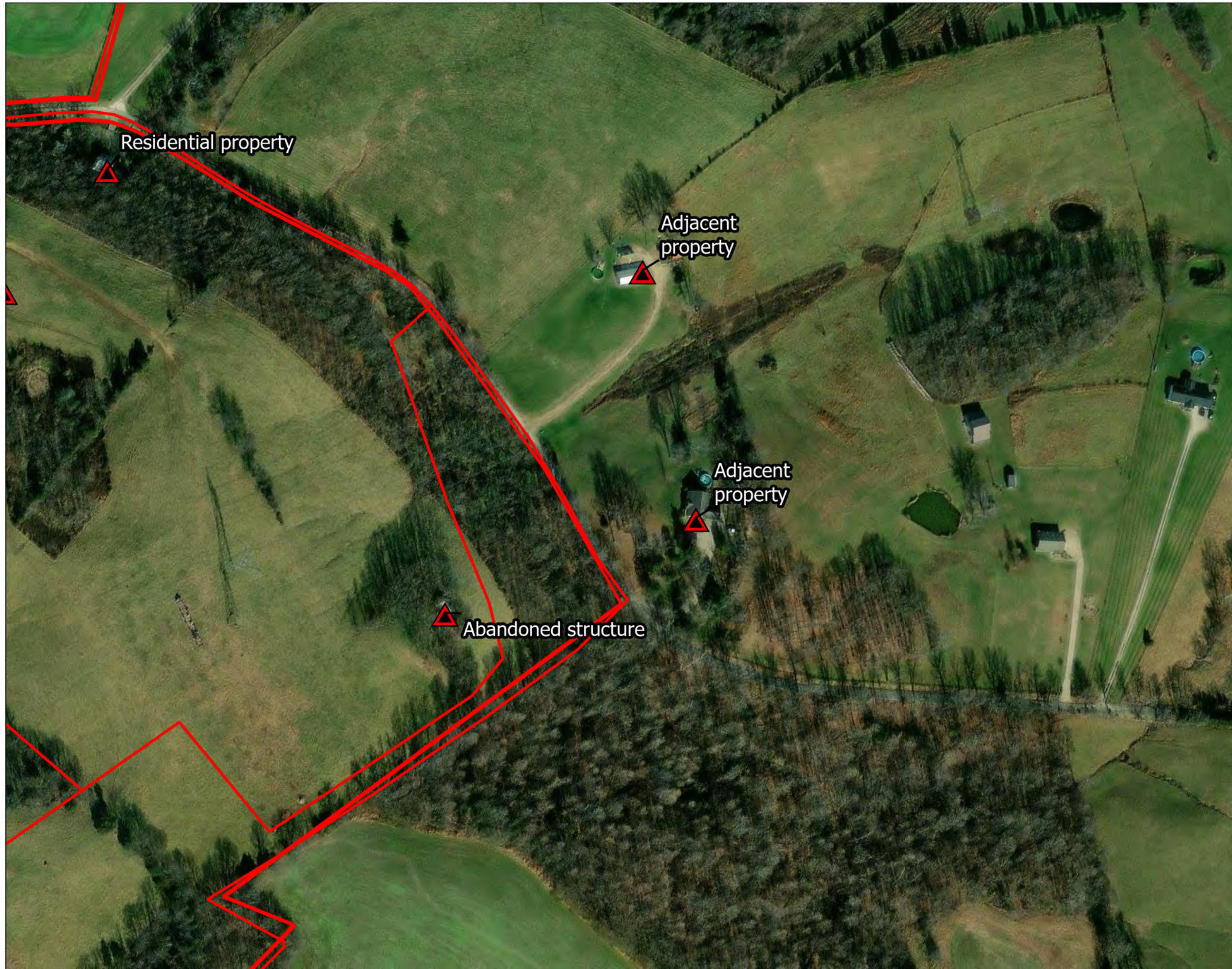
Project Location
Washington and Marion County,
Kentucky

Prepared by MNA on 2024-02-15
TR by KD on 2024-02-20
IR by SPK on 2024-02-20



Legend

-  Project Boundary
-  Phase 1 ESA Points



- Notes
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
 2. Data Sources: EDF Renewables Inc., Stantec
 3. Background: Esri Aerial Imagery Basemap



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Figure No.

4.16

Title

Subject Property Map

Client/Project

EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report

172607795

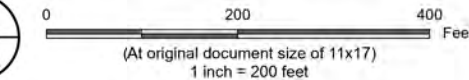
Project Location

Washington and Marion County,
Kentucky

Prepared by MNA on 2024-02-15

TR by KD on 2024-02-20

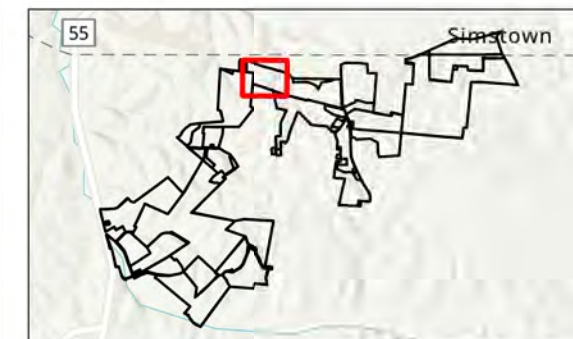
IR by SPK on 2024-02-20



Legend

Project Boundary

Phase 1 ESA Points



Notes

1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
2. Data Sources: EDF Renewables Inc., Stantec
3. Background: Esri Aerial Imagery Basemap



Figure No.

4.17

Title

Subject Property Map

Client/Project

EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report

172607795

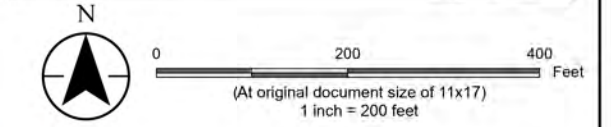
Project Location

Washington and Marion County,
Kentucky

Prepared by MNA on 2024-02-15

TR by KD on 2024-02-20

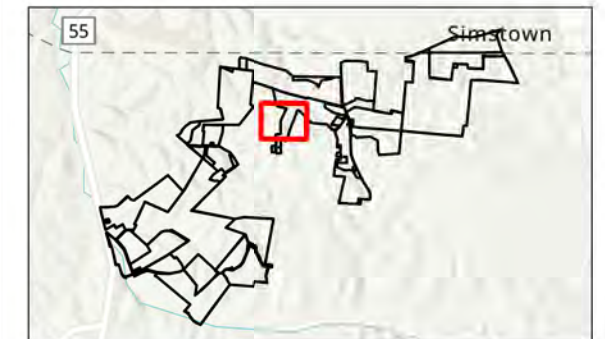
IR by SPK on 2024-02-20



Legend

Project Boundary

Phase 1 ESA Points



- Notes
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
 2. Data Sources: EDF Renewables Inc., Stantec
 3. Background: Esri Aerial Imagery Basemap



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Figure No.

4.18

Title

Subject Property Map

Client/Project

EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report

172607795

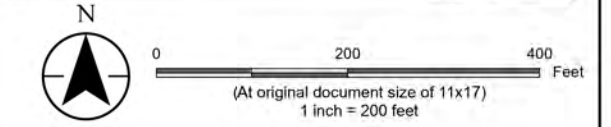
Project Location

Washington and Marion County,
Kentucky

Prepared by MNA on 2024-02-15

TR by KD on 2024-02-20

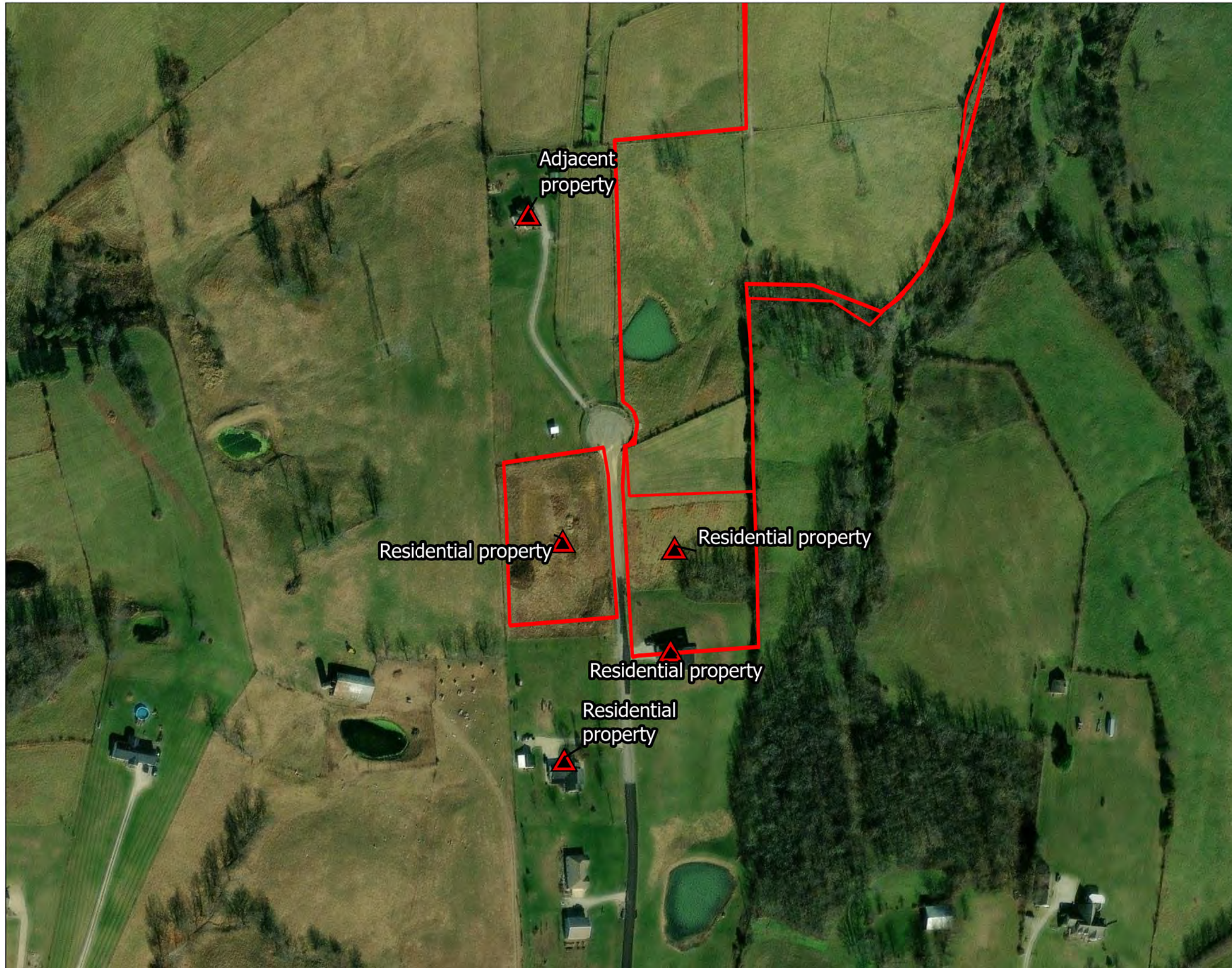
IR by SPK on 2024-02-20



Legend

Project Boundary

Phase 1 ESA Points



Notes
 1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
 2. Data Sources: EDF Renewables Inc., Stantec
 3. Background: Esri Aerial Imagery Basemap



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Figure No.

4.19

Title

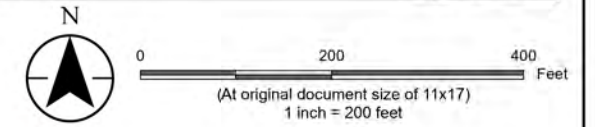
Subject Property Map

Client/Project
EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report

172607795

Project Location
Washington and Marion County,
Kentucky

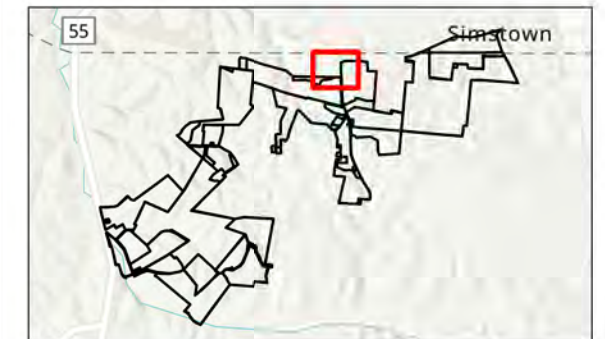
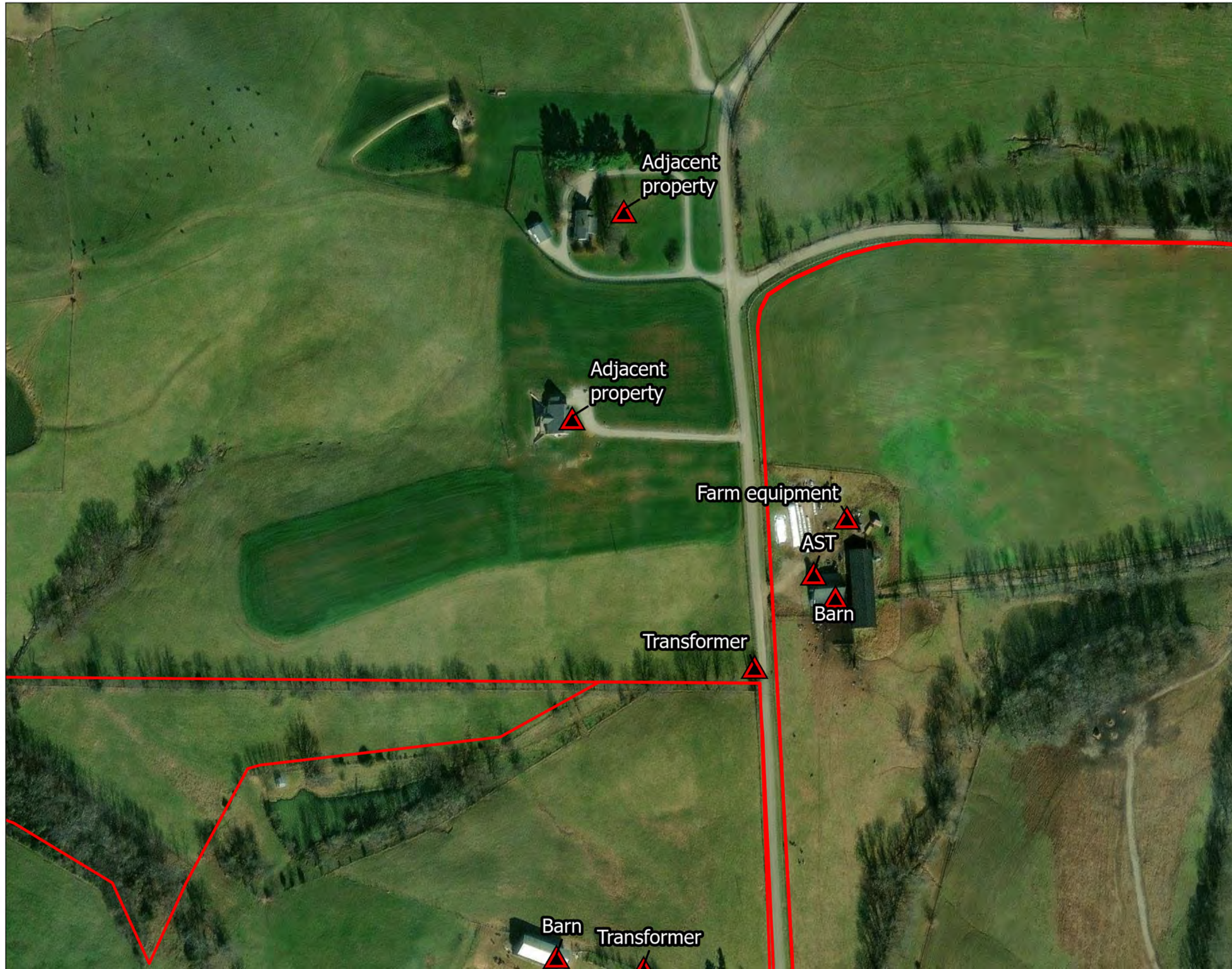
Prepared by MNA on 2024-02-15
TR by KD on 2024-02-20
IR by SPK on 2024-02-20



Legend

Project Boundary

Phase 1 ESA Points



- Notes
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
 2. Data Sources: EDF Renewables Inc., Stantec
 3. Background: Esri Aerial Imagery Basemap



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Figure No.

4.20

Title

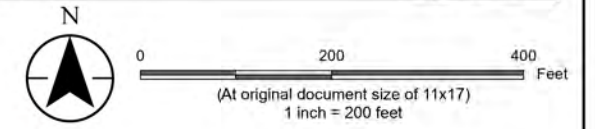
Subject Property Map

Client/Project
EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report

172607795

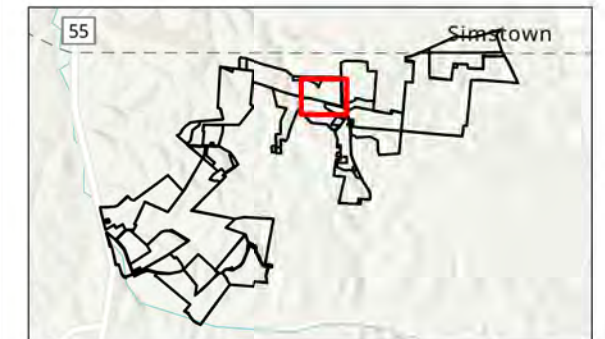
Project Location
Washington and Marion County,
Kentucky

Prepared by MNA on 2024-02-15
TR by KD on 2024-02-20
IR by SPK on 2024-02-20



Legend

- Project Boundary
- ▲ Phase 1 ESA Points



- Notes**
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
 2. Data Sources: EDF Renewables Inc., Stantec
 3. Background: Esri Aerial Imagery Basemap



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Figure No.

4.21

Title

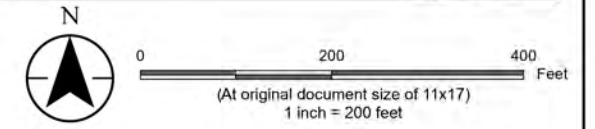
Subject Property Map

Client/Project
EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report

172607795

Project Location
Washington and Marion County,
Kentucky

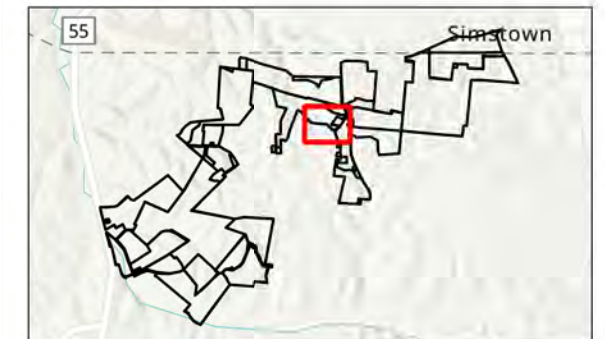
Prepared by MNA on 2024-02-15
TR by KD on 2024-02-20
IR by SPK on 2024-02-20



Legend

Project Boundary

Phase 1 ESA Points



Notes
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
2. Data Sources: EDF Renewables Inc., Stantec
3. Background: Esri Aerial Imagery Basemap



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Figure No.

4.22

Title

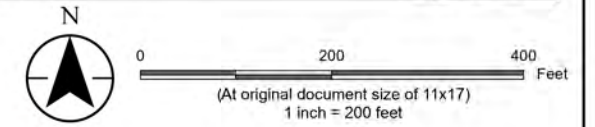
Subject Property Map

Client/Project
EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report

172607795

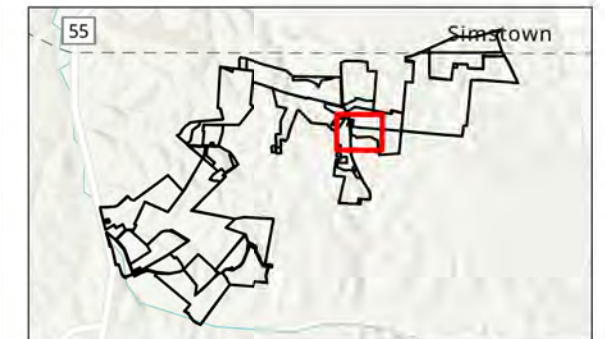
Project Location
Washington and Marion County,
Kentucky

Prepared by MNA on 2024-02-15
TR by KD on 2024-02-20
IR by SPK on 2024-02-20

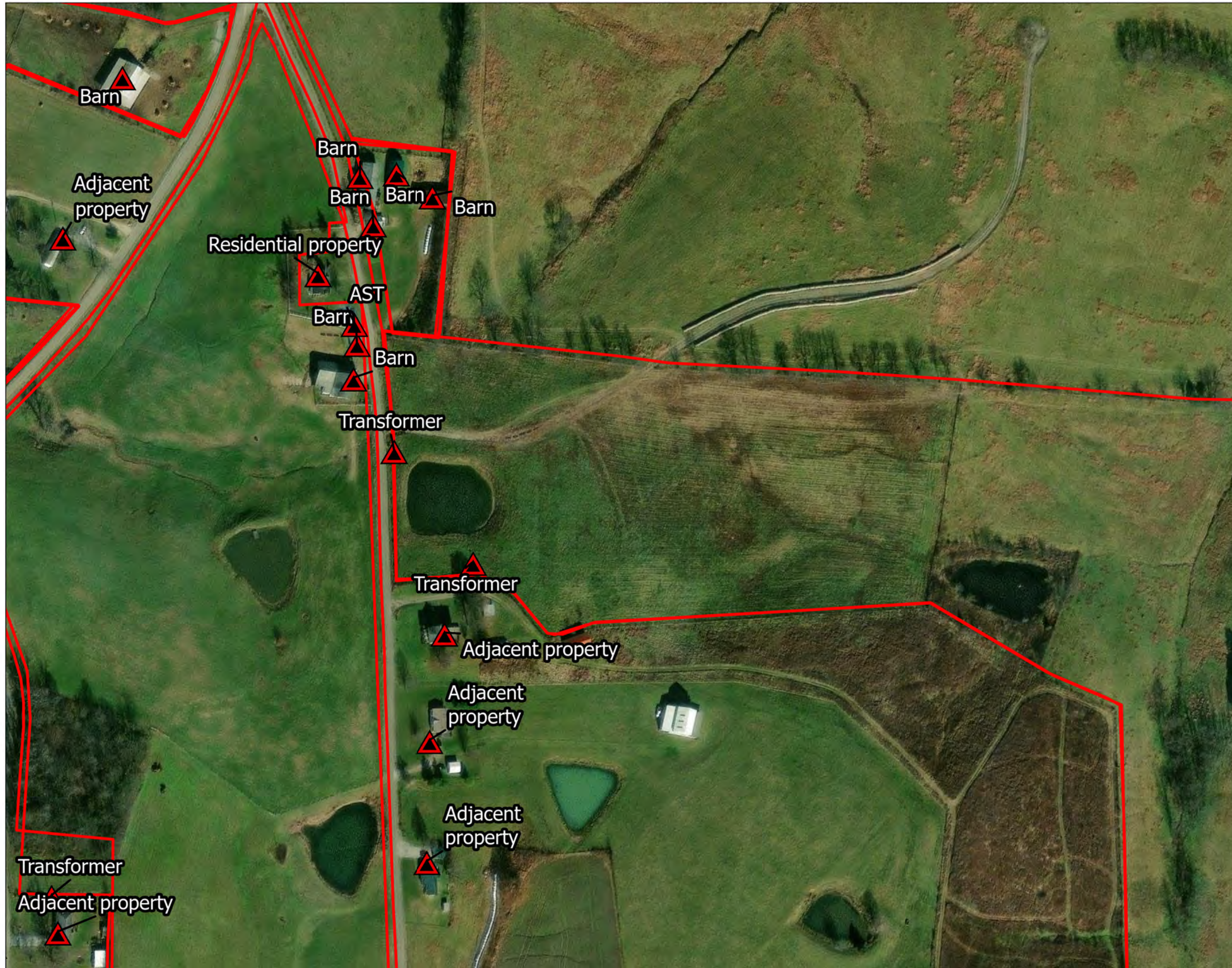


Legend

- Project Boundary
- ▲ Phase 1 ESA Points



- Notes
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
 2. Data Sources: EDF Renewables Inc., Stantec
 3. Background: Esri Aerial Imagery Basemap



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Figure No.
4.23

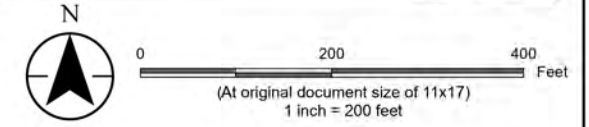
Title
Subject Property Map

Client/Project
EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report

Project Location
Washington and Marion County,
Kentucky

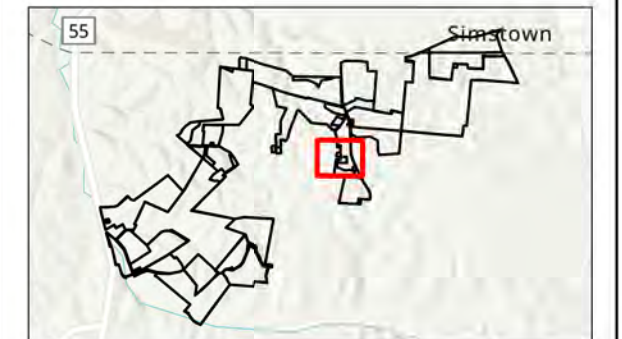
Prepared by MNA on 2024-02-15
TR by KD on 2024-02-20
IR by SPK on 2024-02-20

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Legend

- Project Boundary
- ▲ Phase 1 ESA Points



Notes

1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
2. Data Sources: EDF Renewables Inc., Stantec
3. Background: Esri Aerial Imagery Basemap



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Figure No.

4.24

Title

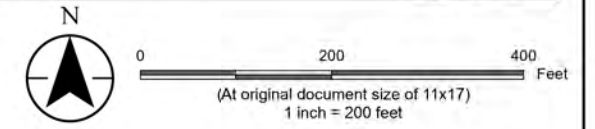
Subject Property Map

Client/Project
 EDF Renewables Inc.
 Northern Bobwhite Solar Project
 Phase 1 ESA Report

172607795

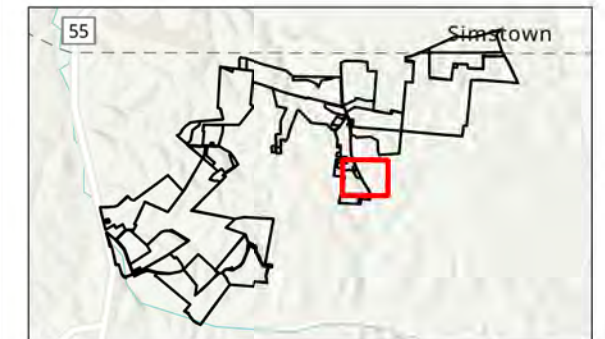
Project Location
 Washington and Marion County,
 Kentucky

Prepared by MNA on 2024-02-15
 TR by KD on 2024-02-20
 IR by SPK on 2024-02-20



Legend

- Project Boundary
- ▲ Phase 1 ESA Points



- Notes
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
 2. Data Sources: EDF Renewables Inc., Stantec
 3. Background: Esri Aerial Imagery Basemap



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Figure No.

4.25

Title

Subject Property Map

Client/Project
EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report

172607795

Project Location
Washington and Marion County,
Kentucky


Prepared by MNA on 2024-02-15
TR by KD on 2024-02-20
IR by SPK on 2024-02-20

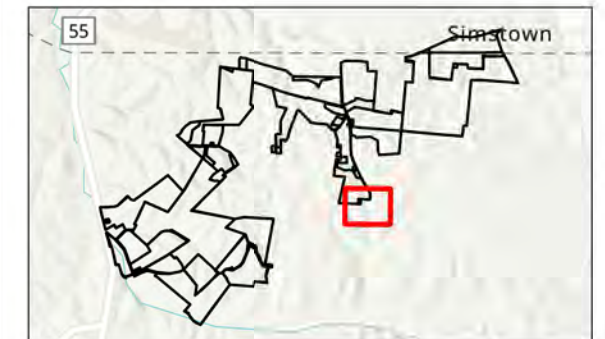


0 200 400 Feet
(At original document size of 11x17)
1 inch = 200 feet

Legend

 Project Boundary

 Phase 1 ESA Points



Notes
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
2. Data Sources: EDF Renewables Inc., Stantec
3. Background: Esri Aerial Imagery Basemap



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Figure No.

4.26

Title

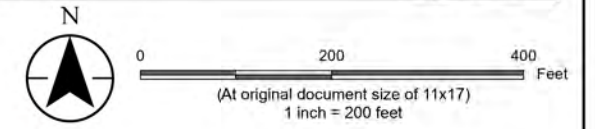
Subject Property Map

Client/Project
EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report



172607795

Project Location
Washington and Marion County,
Kentucky

Prepared by MNA on 2024-02-15
TR by KD on 2024-02-20
IR by SPK on 2024-02-20



Legend

-  Project Boundary
-  Phase 1 ESA Points



- Notes
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
 2. Data Sources: EDF Renewables Inc., Stantec
 3. Background: Esri Aerial Imagery Basemap



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Figure No.

4.27

Title

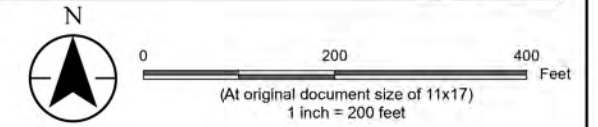
Subject Property Map

Client/Project
EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report

172607795

Project Location
Washington and Marion County,
Kentucky

Prepared by MNA on 2024-02-15
TR by KD on 2024-02-20
IR by SPK on 2024-02-20



Legend

Project Boundary

Phase 1 ESA Points



- Notes
- 1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
 - 2. Data Sources: EDF Renewables Inc., Stantec
 - 3. Background: Esri Aerial Imagery Basemap



Figure No.

4.28

Title

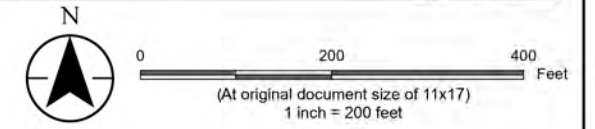
Subject Property Map

Client/Project
EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report


172607795

Project Location
Washington and Marion County,
Kentucky

Prepared by MNA on 2024-02-15
TR by KD on 2024-02-20
IR by SPK on 2024-02-20



Legend

-  Project Boundary
-  Phase 1 ESA Points



- Notes
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
 2. Data Sources: EDF Renewables Inc., Stantec
 3. Background: Esri Aerial Imagery Basemap



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Figure No.

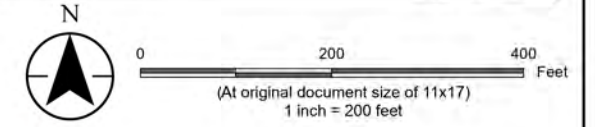
4.29

Title



Subject Property Map

Client/Project 172607795
EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report

Project Location Prepared by MNA on 2024-02-15
Washington and Marion County, TR by KD on 2024-02-20
Kentucky IR by SPK on 2024-02-20



Legend

-  Project Boundary
-  Phase 1 ESA Points



- Notes
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
 2. Data Sources: EDF Renewables Inc., Stantec
 3. Background: Esri Aerial Imagery Basemap



Figure No.
4.30

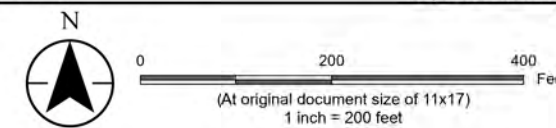
Title
Subject Property Map

Client/Project
EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report



172607795

Project Location
Washington and Marion County,
Kentucky

Prepared by MNA on 2024-02-15
TR by KD on 2024-02-20
IR by SPK on 2024-02-20



Legend

-  Project Boundary
-  Phase 1 ESA Points



- Notes
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
 2. Data Sources: EDF Renewables Inc., Stantec
 3. Background: Esri Aerial Imagery Basemap



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Figure No.

4.31

Title

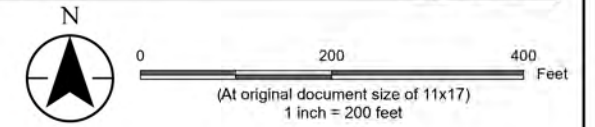
Subject Property Map

Client/Project
EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report

172607795

Project Location
Washington and Marion County,
Kentucky

Prepared by MNA on 2024-02-15
TR by KD on 2024-02-20
IR by SPK on 2024-02-20



Legend

Project Boundary

Phase 1 ESA Points



Notes
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
2. Data Sources: EDF Renewables Inc., Stantec
3. Background: Esri Aerial Imagery Basemap



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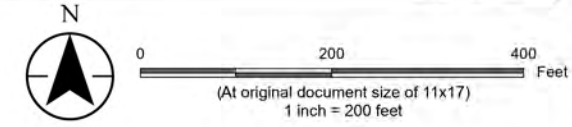
Figure No.
4.32

Title
Subject Property Map

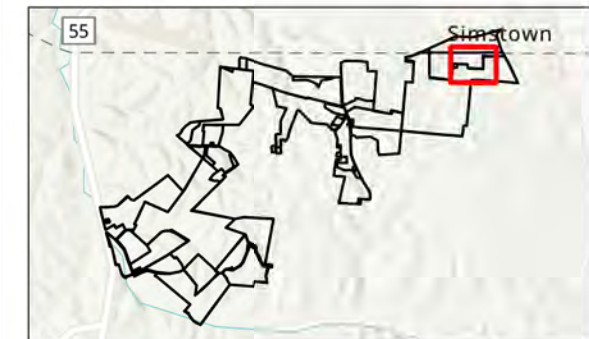
Client/Project
EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report

Project Location
Washington and Marion County,
Kentucky

Prepared by MNA on 2024-02-15
TR by KD on 2024-02-20
IR by SPK on 2024-02-20



- Legend
- Project Boundary
 - ▲ Phase 1 ESA Points



- Notes
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
 2. Data Sources: EDF Renewables Inc., Stantec
 3. Background: Esri Aerial Imagery Basemap



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Figure No.

4.33

Title

Subject Property Map

Client/Project

EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report

172607795

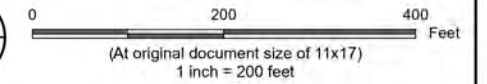
Project Location

Washington and Marion County,
Kentucky

Prepared by MNA on 2024-02-15

TR by KD on 2024-02-20

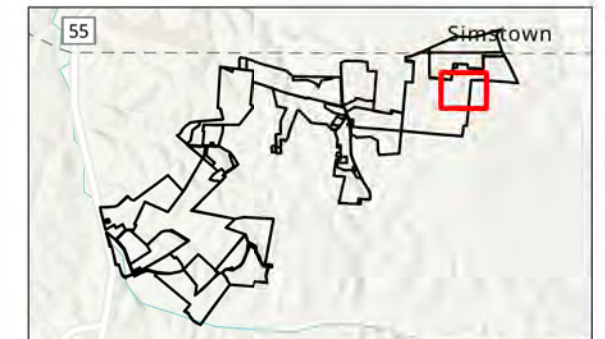
IR by SPK on 2024-02-20



Legend

Project Boundary

Phase 1 ESA Points



- Notes
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
 2. Data Sources: EDF Renewables Inc., Stantec
 3. Background: Esri Aerial Imagery Basemap



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Figure No.

4.34

Title

Subject Property Map

Client/Project
EDF Renewables Inc.
Northern Bobwhite Solar Project
Phase 1 ESA Report

172607795

Project Location
Washington and Marion County,
Kentucky

Prepared by MNA on 2024-02-15
TR by KD on 2024-02-20
IR by SPK on 2024-02-20



0 200 400 Feet
(At original document size of 11x17)
1 inch = 200 feet

Legend

Project Boundary

Phase 1 ESA Points



Notes
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
2. Data Sources: EDF Renewables Inc., Stantec
3. Background: Esri Aerial Imagery Basemap




APPENDICES

APPENDIX A PHOTOGRAPHS OF THE PROPERTY AND VICINITY



Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky


Photograph ID: 1	
Point Location: 37.6210678, -85.20548896	
Parcel Number: 070-035	
Owner's Name: Eugene and Cynthia Campbell	
Comments: Barn with farm equipment storage	
Survey Date: 1/31/2024	

Photograph ID: 2	
Point Location: 37.62015598, -85.20551569	
Parcel Number: 070-035	
Owner's Name: Eugene and Cynthia Campbell	
Comments: Barn with vehicle storage	
Survey Date: 1/31/2024	



Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 3	
Point Location: 37.61996833, -85.20554135	
Parcel Number: 070-035	
Owner's Name: Eugene and Cynthia Campbell	
Comments: Barn with feed silo	
Survey Date: 1/31/2024	

Photograph ID: 4	
Point Location: 37.62053584, -85.20577806	
Parcel Number: 070-035	
Owner's Name: Eugene and Cynthia Campbell	
Comments: Residential home	
Survey Date: 1/31/2024	



Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 5
Point Location: 37.6257046, -85.20817898
Parcel Number: 070-001
Owner's Name: Billy and Marlene Grubbs
Comments: Garage; did not enter
Survey Date: 1/31/2024




Photograph ID: 6
Point Location: 37.60459587, -85.24460893
Parcel Number: 063-017
Owner's Name: Murphy Family Trust
Comments: Barn with farm equipment, industrial A/C units, 5-gallon buckets with unknown contents
Survey Date: 1/30/2024





Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 7	
Point Location: 37.62600191, -85.20857401	
Parcel Number: 070-001	
Owner's Name: Billy and Marlene Grubbs	
Comments: Barn with farm equipment	
Survey Date: 1/31/2024	

Photograph ID: 8	
Point Location: 37.63080876, -85.19197122	
Parcel Number: 070-005	
Owner's Name: Robert and Sherri Hodgen	
Comments: Barn with farm equipment and wood	
Survey Date: 1/31/2024	



Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 9
Point Location: 37.62080411, -85.20540019
Parcel Number: 070-035
Owner's Name: Eugene and Cynthia Campbell
Comments: Garage
Survey Date: 1/31/2024



Photograph ID: 10
Point Location: 37.6000836, -85.2228585
Parcel Number: 064-002
Owner's Name: Aileen and Jimmy Thompson
Comments: Barn with farm equipment and hay; no staining observed
Survey Date: 1/30/2024





Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 11
Point Location: 37.5990310, -85.22390675
Parcel Number: 064-002
Owner's Name: Aileen and Jimmy Thompson
Comments: Barn with farm equipment, diesel AST, pesticide sprayer, feed AST, and water container; did not enter
Survey Date: 1/30/2024



Photograph ID: 12
Point Location: 37.5990310, -85.22390675
Parcel Number: 064-002
Owner's Name: Aileen and Jimmy Thompson
Comments: Barn with farm equipment, diesel AST, pesticide sprayer, feed AST, and water container; did not enter
Survey Date: 1/30/2024





Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 13	
Point Location: 37.61690994, -85.21959518	
Parcel Number: 835302724	
Owner's Name: Alice and Andrew Charles Clark	
Comments: Residential home	
Survey Date: 1/30/2024	

Photograph ID: 14	
Point Location: 37.61631219, -85.21886368	
Parcel Number: 070-007	
Owner's Name: Alice and Andrew Charles Clark	
Comments: Residential home	
Survey Date: 1/30/2024	



Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 15
Point Location: 37.6168698, -85.21883255
Parcel Number: 070-007
Owner's Name: Alice and Andrew Charles Clark
Comments: Residential home
Survey Date: 1/30/2024




Photograph ID: 16
Point Location: 37.61702677, -85.22991299
Parcel Number: 063-017
Owner's Name: Murphy Family Trust
Comments: Residential home, barn
Survey Date: 1/30/2024





Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky


Photograph ID: 17	
Point Location: 37.61710036, -85.23278983	
Parcel Number: 063-017	
Owner's Name: Murphy Family Trust	
Comments: Residential home	
Survey Date: 1/30/2024	


Photograph ID: 18	
Point Location: 37.61834145, -85.23338382	
Parcel Number: 063-021	
Owner's Name: William Cole Mattingly	
Comments: Barn with farm equipment, 5-gallon buckets of hydraulic fluid with unknown contents	
Survey Date: 1/30/2024	



Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 19	
Point Location: 37.61864697, -85.23663354	
Parcel Number: 063-007	
Owner's Name: Melissa and Clarence Murphy	
Comments: Barn	
Survey Date: 1/30/2024	

Photograph ID: 20	
Point Location: 37.6216114, -85.20710571	
Parcel Number: 070-007	
Owner's Name: Alice and Andrew Charles Clark	
Comments: Barn with farm equipment	
Survey Date: 1/30/2024	



Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 21	
Point Location: 37.6236001, -85.21089805	
Parcel Number: 070-007	
Owner's Name: Alice and Andrew Charles Clark	
Comments: Residential home	
Survey Date: 1/30/2024	

Photograph ID: 22	
Point Location: 37.63237514, -85.18425347	
Parcel Number: 026-020	
Owner's Name: Robert and Sherri Hodgen	
Comments: Residential home	
Survey Date: 1/31/2024	



Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 23	
Point Location: 37.63237514, -85.18425347	
Parcel Number: 026-020	
Owner's Name: Robert and Sherri Hodgen	
Comments: Barn	
Survey Date: 1/31/2024	

Photograph ID: 24	
Point Location: 37.63234481, -85.18459478	
Parcel Number: 026-020	
Owner's Name: Robert and Sherri Hodgen	
Comments: Barn	
Survey Date: 1/31/2024	



Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 25
Point Location: 37.63234481, -85.18459478
Parcel Number: 026-020
Owner's Name: Robert and Sherri Hodgen
Comments: Concrete silo
Survey Date: 1/31/2024



Photograph ID: 26
Point Location: 37.63176531, -85.18437437
Parcel Number: 026-020
Owner's Name: Robert and Sherri Hodgen
Comments: Barn; did not enter
Survey Date: 1/31/2024





Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 27	
Point Location: 37.63165903, -85.18431124	
Parcel Number: 026-020	
Owner's Name: Robert and Sherri Hodgen	
Comments: Barn with rusted and abandoned vehicles and farm equipment	
Survey Date: 1/31/2024	

Photograph ID: 28	
Point Location: 37.61417499, -85.20444635	
Parcel Number: 070-035	
Owner's Name: Eugene and Cynthia Campbell	
Comments: Residential home	
Survey Date: 1/31/2024	



Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 29
Point Location: 37.60711696, -85.25090575
Parcel Number: 063-015
Owner's Name: David Clark
Comments: Barn with farm equipment, debris, diesel container, silo, water heater, tires, UST
Survey Date: 1/30/2024



Photograph ID: 30
Point Location: 37.60086823, -85.246074
Parcel Number: 064-001A
Owner's Name: Edward Luckett
Comments: Small silo and barn with farm equipment
Survey Date: 1/30/2024





Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 31
Point Location: 37.60086823, -85.246074
Parcel Number: 064-001A
Owner's Name: Edward Lockett
Comments: Small silo and barn with farm equipment
Survey Date: 1/30/2024



Photograph ID: 32
Point Location: 37.60250937, -85.24534735
Parcel Number: 064-001A
Owner's Name: Edward Lockett
Comments: Barn
Survey Date: 1/30/2024





Photographic Log

Client: Northern Bobwhite Solar LLC	Project: Northern Bobwhite Solar Project
Site Name: Northern Bobwhite Solar	Site Location: Washington and Marion County, Kentucky
Photograph ID: 33	
Point Location: 37.60256113, -85.22319254	
Parcel Number: 064-002	
Owner's Name: Aileen and Jimmy Thompson	
Comments: Silo	
Survey Date: 1/30/2024	
Photograph ID: 34	
Point Location: 37.60066877, -85.23460427	
Parcel Number: 064-001-03	
Owner's Name: Murphy Family Trust	
Comments: Farm equipment	
Survey Date: 1/30/2024	



Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 35	
Point Location: 37.59862373, -85.23986547	
Parcel Number: 064-001-03	
Owner's Name: Murphy Family Trust	
Comments: Residential home	
Survey Date: 1/30/2024	

Photograph ID: 36	
Point Location: 37.59870802, -85.24117029	
Parcel Number: 064-001-03	
Owner's Name: Murphy Family Trust	
Comments: Residential home	
Survey Date: 1/30/2024	



Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 37	
Point Location: 37.60039643, -85.24681094	
Parcel Number: 064-001B	
Owner's Name: Murphy Family Trust	
Comments: Residential home	
Survey Date: 1/30/2024	

Photograph ID: 38	
Point Location: 37.60092693, -85.24659739	
Parcel Number: 064-001A	
Owner's Name: Edward Lockett	
Comments: Residential home	
Survey Date: 1/30/2024	



Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 39	
Point Location: 37.60247208, -85.24418507	
Parcel Number: 064-001A	
Owner's Name: Edward Lockett	
Comments: Hay barn	
Survey Date: 1/30/2024	

Photograph ID: 40	
Point Location: 37.60644642, -85.24989368	
Parcel Number: 063-015	
Owner's Name: David Clark	
Comments: Barn with farm equipment and tanks for cattle	
Survey Date: 1/30/2024	



Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 41
Point Location: 37.60703602, -85.25033749
Parcel Number: 063-015
Owner's Name: David Clark
Comments: Cattle barn
Survey Date: 1/30/2024



Photograph ID: 42
Point Location: 37.61677934, -85.23087776
Parcel Number: 063-017
Owner's Name: Murphy Family Trust
Comments: Barn
Survey Date: 1/30/2024





Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 43
Point Location: 37.60151826, -85.22606173
Parcel Number: 064-002-03-04
Owner's Name: Mollie Sullivan and Jeremy Blair
Comments: Residential home
Survey Date: 1/30/2024



Photograph ID: 44
Point Location: 37.62060631, -85.21778703
Parcel Number: 070-007
Owner's Name: Alice and Andrew Charles Clark
Comments: Hay barn
Survey Date: 1/30/2024





Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky


Photograph ID: 45	
Point Location: 37.60487911, -85.24944827	
Parcel Number: N/A	
Owner's Name: Kentucky Utilities Company	
Comments: Electrical substation	
Survey Date: 1/30/2024	

Photograph ID: 46	
Point Location: 37.60487911, -85.24944827	
Parcel Number: N/A	
Owner's Name: Kentucky Utilities Company	
Comments: Electrical substation	
Survey Date: 1/30/2024	



Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 47	
Point Location: 37.6177735, -85.23141497	
Parcel Number: 063-008-02	
Owner's Name: William Cole Mattingly	
Comments: Pole mounted transformer with "No PCB" sticker	
Survey Date: 1/30/2024	

Photograph ID: 48	
Point Location: 37.61867227, -85.23756119	
Parcel Number: 063-007 (adjacent)	
Owner's Name: Clarence and Melissa Murphy (adjacent)	
Comments: Pole mounted transformer with "No PCB" sticker	
Survey Date: 1/30/2024	



Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 49
Point Location: 37.59939332, -85.22376925
Parcel Number: 064-002
Owner's Name: Aileen and Jimmy Thompson
Comments: Pole mounted transformer without "No PCB" sticker
Survey Date: 1/30/2024



Photograph ID: 50
Point Location: 37.62095462, -85.20499245
Parcel Number: 070-035
Owner's Name: Eugene and Cynthia Campbell
Comments: 55-gallon drums with unknown contents. No staining or odor observed.
Survey Date: 1/31/2024





Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 51	
Point Location: 37.63214716, -85.18446229	
Parcel Number: 026-020	
Owner's Name: Robert and Sherri Hodgen	
Comments: Rusted AST. No staining or odor observed.	
Survey Date: 1/31/2024	

Photograph ID: 52	
Point Location: 37.63239145, -85.18436351	
Parcel Number: 026-020	
Owner's Name: Robert and Sherri Hodgen	
Comments: Rusted AST. No staining or odor observed.	
Survey Date: 1/31/2024	



Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 53	
Point Location: 37.63230625, -85.18408533	
Parcel Number: 026-020	
Owner's Name: Robert and Sherri Hodgen	
Comments: Diesel AST on trailer. No staining or odor observed.	
Survey Date: 1/31/2024	

Photograph ID: 54	
Point Location: 37.63230625, -85.18408533	
Parcel Number: 026-020	
Owner's Name: Robert and Sherri Hodgen	
Comments: Diesel container, AST; stressed vegetation and odor observed	
Survey Date: 1/31/2024	



Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 55	
Point Location: 37.60482533, -85.24513618	
Parcel Number: 063-017	
Owner's Name: Murphy Family Trust	
Comments: Diesel AST. No staining or odor observed.	
Survey Date: 1/30/2024	

Photograph ID: 56	
Point Location: 37.60711696, -85.25090575	
Parcel Number: 063-015	
Owner's Name: David Clark	
Comments: Shed and Diesel AST. No staining or odor observed.	
Survey Date: 1/30/2024	



Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 57

Point Location:
37.60075435,
-85.24624511

Parcel Number:
064-001A

Owner's Name:
Edward Lockett

Comments:
Diesel container, AST; no staining or odor observed.

Survey Date:
1/30/2024



Photograph ID: 58

Point Location:
37.6236817, -85.21130194

Parcel Number:
070-007

Owner's Name:
Alice and Andrew Charles Clark

Comments:
Diesel AST. No staining or odor observed.

Survey Date:
1/30/2024





Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 59
Point Location: 37.5990310, -85.22390675
Parcel Number: 064-002
Owner's Name: Aileen and Jimmy Thompson
Comments: Diesel AST. No staining or odor observed.
Survey Date: 1/30/2024



Photograph ID: 60
Point Location: 37.62026452, -85.20553292
Parcel Number: 070-035
Owner's Name: Eugene and Cynthia Campbell
Comments: Propane tank, AST. No staining or odor observed.
Survey Date: 1/31/2024





Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 61	
Point Location: 37.62570791, -85.20809359	
Parcel Number: 070-001	
Owner's Name: Billy and Marlene Grubbs	
Comments: Propane tanks for RV	
Survey Date: 1/31/2024	

Photograph ID: 62	
Point Location: 37.6279471, -85.20665676	
Parcel Number: 835302691	
Owner's Name: SNS Rentals, LLC	
Comments: Barn with farm equipment storage; large AST beside barn.	
Survey Date: 1/31/2024	



Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 63	
Point Location: 37.60066407, -85.23497062	
Parcel Number: 063-017	
Owner's Name: Murphy Family Trust	
Comments: 325-gallon water tank	
Survey Date: 1/30/2024	


Photograph ID: 64	
Point Location: 37.60705091, -85.25091492	
Parcel Number: 063-015	
Owner's Name: David Clark	
Comments: Metal debris burn pile	
Survey Date: 1/30/2024	



Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 65	
Point Location: 37.60146005, -85.23389993	
Parcel Number: 063-017	
Owner's Name: Murphy Family Trust	
Comments: Water well and hose	
Survey Date: 1/30/2024	

Photograph ID: 66	
Point Location: 37.6048484, -85.23167397	
Parcel Number: 063-017	
Owner's Name: Murphy Family Trust	
Comments: 55-gallon drum	
Survey Date: 1/30/2024	



Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 67
Point Location:
37.61461019, -85.2276227
Parcel Number:
063-017
Owner's Name:
Murphy Family Trust
Comments:
Abandoned house
Survey Date:
1/30/2024





Photograph ID: 68
Point Location:
37.61461019, -85.2276227
Parcel Number:
063-017
Owner's Name:
Murphy Family Trust
Comments:
Debris, metal scrap
Survey Date:
1/30/2024





Photographic Log

Client: Northern Bobwhite Solar LLC		Project: Northern Bobwhite Solar Project	
Site Name: Northern Bobwhite Solar		Site Location: Washington and Marion County, Kentucky	
Photograph ID: 69			
Point Location: 37.61677934, -85.23087776			
Parcel Number: 063-017			
Owner's Name: Murphy Family Trust			
Comments: Barn with fire extinguishers, 4 buckets of roof coating, empty kerosene container, scrap wood			
Survey Date: 1/30/2024			
Photograph ID: 70			
Point Location: 37.61677934, -85.23087776			
Parcel Number: 063-017			
Owner's Name: Murphy Family Trust			
Comments: Barn with fire extinguishers, 4 buckets of roof coating, empty kerosene container, scrap wood			
Survey Date: 1/30/2024			



Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 71

Point Location:
37.61677934,
-85.23087776

Parcel Number:
063-017

Owner's Name:
Murphy Family Trust

Comments:
Barn with fire extinguishers, 4 buckets of roof coating, empty kerosene container, scrap wood

Survey Date:
1/30/2024



Photograph ID: 72

Point Location:
37.60459587,
-85.24460893

Parcel Number:
063-017

Owner's Name:
Murphy Family Trust

Comments:
Barn with farm equipment, industrial A/C units, 5-gallon buckets with unknown contents

Survey Date:
1/30/2024





Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 73

Point Location:
37.60459587,
-85.24460893

Parcel Number:
063-017

Owner's Name:
Murphy Family Trust

Comments:
Barn with farm equipment,
industrial A/C units,
5-gallon buckets with
unknown contents

Survey Date:
1/30/2024



Photograph ID: 74

Point Location:
37.60711696,
-85.25090575

Parcel Number:
063-015

Owner's Name:
David Clark

Comments:
Barn with farm equipment,
debris, diesel container


Survey Date:
1/30/2024





Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 75	
Point Location: 37.60711696, -85.25090575	
Parcel Number: 063-015	
Owner's Name: David Clark	
Comments: Barn with farm equipment, debris, diesel container, silo, water heater, tires, AST	
Survey Date: 1/30/2024	

Photograph ID: 76	
Point Location: 37.60711696, -85.25090575	
Parcel Number: 063-015	
Owner's Name: David Clark	
Comments: Tires	
Survey Date: 1/30/2024	



Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 77

Point Location:
37.60713362,
-85.25049635

Parcel Number:
063-015

Owner's Name:
David Clark

Comments:
A/C units, debris

Survey Date:
1/30/2024



Photograph ID: 78

Point Location:
37.60676937,
-85.25058114

Parcel Number:
063-015

Owner's Name:
David Clark

Comments:
Household debris and farm equipment

Survey Date:
1/30/2024





Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 79
Point Location: 37.60115416, -85.22618692
Parcel Number: 064-002-03-04
Owner's Name: Mollie Sullivan and Jeremy Blair
Comments: Barn with farm equipment; no staining observed
Survey Date: 1/30/2024



Photograph ID: 80
Point Location: 37.60115416, -85.22618692
Parcel Number: 064-002-03-04
Owner's Name: Mollie Sullivan and Jeremy Blair
Comments: Barn with farm equipment; no staining observed
Survey Date: 1/30/2024





Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 81

Point Location:
37.5990310, -85.22390675

Parcel Number:
064-002

Owner's Name:
Aileen and Jimmy Thompson

Comments:
Barn with farm equipment, diesel AST, pesticide sprayer, feed AST, and water container; did not enter

Survey Date:
1/30/2024



Photograph ID: 82

Point Location:
37.6233327, -85.21127088

Parcel Number:
070-007

Owner's Name:
Alice and Andrew Charles Clark

Comments:
Shed with motor oil and hydraulic oil containers; odor detected

Survey Date:
1/30/2024






Photographic Log

Client: Northern Bobwhite Solar LLC Project: Northern Bobwhite Solar Project	
Site Name: Northern Bobwhite Solar Site Location: Washington and Marion County, Kentucky	
Photograph ID: 83	
Point Location: 37.62595997, -85.18403777	
Parcel Number: 070-005	
Owner's Name: Robert and Sherri Hodgen	
Comments: Tires and concrete in stream bank	
Survey Date: 1/31/2024	
Photograph ID: 84	
Point Location: 37.63163067, -85.18473184	
Parcel Number: 026-020	
Owner's Name: Robert and Sherri Hodgen	
Comments: Debris, metal scrap and tires	
Survey Date: 1/31/2024	



Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky


Photograph ID: 85	
Point Location: 37.61530455, -85.23186247	
Parcel Number: 063-017 (adjacent)	
Owner's Name: Murphy Family Trust (adjacent)	
Comments: Representative residential property in the area.	
Survey Date: 1/30/2024	

Photograph ID: 86	
Point Location: 37.60631647, -85.25049033	
Parcel Number: 063-015 (adjacent)	
Owner's Name: David Clark (adjacent)	
Comments: Representative residential property in the area.	
Survey Date: 1/30/2024	



Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 87	
Point Location: 37.60632704, -85.25050761	
Parcel Number: 063-015 (adjacent)	
Owner's Name: David Clark (adjacent)	
Comments: Representative residential property in the area.	
Survey Date: 1/30/2024	

Photograph ID: 88	
Point Location: 37.61572342, -85.21959333	
Parcel Number: 835302724 (adjacent)	
Owner's Name: Alice and Andrew Charles Clark (adjacent)	
Comments: Representative residential property in the area.	
Survey Date: 1/30/2024	



Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky


Photograph ID: 89	
Point Location: 37.61583684, -85.20849268	
Parcel Number: 070-035 (adjacent)	
Owner's Name: Eugene and Cynthia Campbell (adjacent)	
Comments: Representative residential property in the area.	
Survey Date: 1/30/2024	


Photograph ID: 90	
Point Location: 37.61549946, -85.20852313	
Parcel Number: 070-035 (adjacent)	
Owner's Name: Eugene and Cynthia Campbell (adjacent)	
Comments: Representative residential property in the area.	
Survey Date: 1/30/2024	



Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 91	
Point Location: 37.61557294, -85.20746872	
Parcel Number: 070-035 (adjacent)	
Owner's Name: Eugene and Cynthia Campbell (adjacent)	
Comments: Representative residential property in the area.	
Survey Date: 1/30/2024	


Photograph ID: 92	
Point Location: 37.61498113, -85.20858773	
Parcel Number: 070-035 (adjacent)	
Owner's Name: Eugene and Cynthia Campbell (adjacent)	
Comments: Representative residential property in the area.	
Survey Date: 1/30/2024	



Photographic Log



Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 93	
Point Location: 37.6145164, -85.20929407	
Parcel Number: 070-035 (adjacent)	
Owner's Name: Eugene and Cynthia Campbell (adjacent)	
Comments: Representative residential property in the area.	
Survey Date: 1/30/2024	

Photograph ID: 94	
Point Location: 37.61398033, -85.20848614	
Parcel Number: 070-035 (adjacent)	
Owner's Name: Eugene and Cynthia Campbell (adjacent)	
Comments: Representative residential property in the area.	
Survey Date: 1/30/2024	



Photographic Log


Client: Northern Bobwhite Solar LLC		Project: Northern Bobwhite Solar Project	
Site Name: Northern Bobwhite Solar		Site Location: Washington and Marion County, Kentucky	
Photograph ID: 95			
Point Location: 37.61948873, -85.23819457			
Parcel Number: 063-007 (adjacent)			
Owner's Name: Melissa and Clarence Murphy (adjacent)			
Comments: Representative residential property in the area.			
Survey Date: 1/30/2024			
Photograph ID: 96			
Point Location: 37.61672774, -85.20864015			
Parcel Number: 070-035 (adjacent)			
Owner's Name: Eugene and Cynthia Campbell (adjacent)			
Comments: Representative residential property in the area.			
Survey Date: 1/30/2024			



Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky


Photograph ID: 97	
Point Location: 37.62892569, -85.20844554	
Parcel Number: 835302691 (adjacent)	
Owner's Name: SNS Rentals, LLC (adjacent)	
Comments: Representative residential property in the area.	
Survey Date: 1/31/2024	


Photograph ID: 98	
Point Location: 37.61799798, -85.20503319	
Parcel Number: 070-035 (adjacent)	
Owner's Name: Eugene and Cynthia Campbell (adjacent)	
Comments: Representative residential property in the area.	
Survey Date: 1/31/2024	



Photographic Log

Client:	Northern Bobwhite Solar LLC	Project:	Northern Bobwhite Solar Project
Site Name:	Northern Bobwhite Solar	Site Location:	Washington and Marion County, Kentucky

Photograph ID: 99	
Point Location: 37.61734092, -85.2050576	
Parcel Number: 070-035 (adjacent)	
Owner's Name: Eugene and Cynthia Campbell (adjacent)	
Comments: Representative residential property in the area.	
Survey Date: 1/31/2024	

Photograph ID: 100	
Point Location: 37.61858074, -85.20492695	
Parcel Number: 070-017-04 (adjacent)	
Owner's Name: Garrett Land Corp (adjacent)	
Comments: Representative residential property in the area.	
Survey Date: 1/31/2024	

APPENDIX B STANTEC RESUMES

Lucas Downs

Environmental Scientist
1 years of experience · Louisville, Kentucky

Lucas recently graduated from Clemson University with a B.S in Wildlife and Fisheries Biology. While there he learned about the biology and ecology of the Southeast region. He spent time working on projects involving wetlands, wood duck boxes, and fisheries management. Additionally, Lucas studied abroad in Bhutan. While there he and a group of his peers conducted research on the cause of Blue Pine Dieback in the Eastern Himalayan Mountains between Paro and Thimphu. Lucas participated in various education in-field experiences with environmental advocates, engineers, doctors, and politicians. Lucas presented the groups findings in a scientific paper to his peers and high ranking scientists and teachers.

EDUCATION

Himalayan Environmental and Development Studies,
School for Field Studies, Paro, Bhutan, 2019

Bachelor of Science, Clemson University, Clemson, SC,
United States, 2020

PROJECT EXPERIENCE

PHASE I & II ENVIRONMENTAL SITE ASSESSMENTS

I75/I275 Interchange Scope | KYTC | Boone County,
Kentucky | 2022 | Environmental Scientist

Conducted a Phase I Environmental Site Assessment field visit. Coordinated with site contacts to gather environmental site documentation and permits to determine any potential environmental concerns for the site. Prepared a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client.

Bobo Road Expansion | Kentucky Transportation Cabinet
| Paducah, Kentucky | 2022 | Environmental Scientist

Conducted a Phase I Environmental Site Assessment field visit. Coordinated with site contacts to gather environmental site documentation and permits to determine any potential environmental concerns for the site. Assisted in preparation of a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client.

Murray-Calloway County Airport | Murray-Calloway
County Airport Board | Calloway County, Kentucky | 2022
| Environmental Scientist

Conducted a Phase I Environmental Site Assessment field visit at the approximately 82-acre site. Coordinated with site contacts to gather environmental site documentation and permits to determine any potential environmental concerns for the site. Prepared a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client.

Ridgeline Expansion Project | East Tennessee Natural
Gas | Trousdale County, Tennessee | 2022 |
Environmental Scientist

Conducted a Phase I Environmental Site Assessment field visit at the approximately 12-acre site. Coordinated with site contacts to gather environmental site documentation and permits to determine any potential environmental concerns for the site. Prepared a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client.

Morris Forman Phase 1 | Louisville, Kentucky, United States | 2023 | Environmental Scientist

Conducted a Phase I Environmental Site Assessment field visit. Coordinated with site contacts to gather environmental site documentation and permits to determine any potential environmental concerns for the site. Prepared a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client.

Ashwood Solar I | Kentucky, United States | 2023 | Environmental Scientist

Prepared a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client.

Song Sparrow | 2023 | Environmental Scientist

Prepared a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client.



Kelly Daniels PWS, QHP-IT

Biologist - Technical Writer

Kelly Daniels is a Biologist and Technical Writer with experience conducting ecological field work and preparing Jurisdictional Determinations and Clean Water Act Section 401/404 permit packages. Kelly has experience writing Phase 1 Environmental Site Assessment (ESA) reports as well as conducting site visits. Her experience in consulting has strengthened her data analysis and writing skills as well as her understanding of ecological concepts, environmental laws and regulations, and her ability to lead teams in the field and the office. In addition, she has 3 years of research experience outside of consulting which includes a variety of wildlife surveys, wildflower surveys, and stream restoration work. Kelly is also proficient in ArcGIS, Collector for ArcGIS, and Microsoft Office programs.

EDUCATION

MS, Environmental Science, University of Tennessee at Chattanooga, Chattanooga, Tennessee, 2018

BS, Environmental and Natural Resources (Minor in Biological Science), Clemson University, Clemson, South Carolina, 2016

CERTIFICATIONS & TRAINING

Groundwater Sampling, Environmental Standards, Knoxville, Tennessee, 2019

OSHA 10-Hour Construction Safety, AdvanceOnline Solutions Online Institute, Houston, TX, 2019

ASTM E1527 - Phase I & Phase II Environmental Site Assessment Process, ASTM International, Virtual Event, VE, United States, 2021

PROJECT EXPERIENCE

PHASE I & II ENVIRONMENTAL SITE ASSESSMENTS

Boeuf River Solar, Phase I ESA | ESA Solar | Arkansas, United States | 2023 | Environmental Scientist

Quartz Solar Project | Quartz Solar, LLC | Arkansas, United States | 2023 | Environmental Scientist

906-910 Pendleton Street Phase I Environmental Site Assessment | SP3 Investments | Greenville, South Carolina, United States | 2023 | Environmental Scientist

Hazardous Sites Evaluation and Water Well Survey | City of Lynchburg | Lynchburg, Virginia, United States | 2022-2023 | Environmental Scientist

Avangrid - Phase I ESAs | Avangrid | Virginia | 2022 | Environmental Scientist

Kingfish Phase I ESA | EDF Renewables Distributed Solutions, Inc. | Cape Charles, Virginia, United States | 2022 | Environmental Scientist

Project Sprint, Phase I ESAs | Baker Hughes Company | 2021-2022 | Document Writing Team Lead/Writer

BP North America - Phase I ESAs | BP North America | 2022 | Environmental Scientist

Four Seasons Residential Development, Phase I ESA | K. Hovnanian Homes | Ruckersville, Virginia, United States | 2021 | Environmental Scientist

Meadowland Stream Mitigation Project, Phase I ESA | Resource Environmental Solutions, LLC | 2021 | Environmental Scientist

Arnold & Porter - Phase I ESA | Arnold & Porter | Gaithersburg, Maryland, United States | 2021 | Environmental Scientist

Puerto Rico Electric Power Authority (PREPA), Phase I ESAs | LUMA | 2021 | Document Writing Team Lead/Writer

Phase I ESA Kitty Hawk Wind LLC | Kitty Hawk Wind LLC | Virginia Beach, Virginia, United States | Environmental Scientist

Todd County, Tennessee Solar Site | esaSolar | Kentucky, United States | 2021 | Environmental Scientist

Stonefield Solar Project | Naturgy Candela Devco LLC | Cecilia, Kentucky, United States | 2021 | Environmental Scientist

Lincoln County, Tennessee Solar Site | esaSolar | Tennessee, United States | 2021 | Environmental Scientist

Graceland Solar Project | RWE Renewables Americas, LLC | Tennessee, United States | 2020 | Environmental Scientist

SE Titan, LLC | SE Titan, LLC | Texas, United States | 2020 | Environmental Scientist

SE Aragorn, LLC | SE Aragorn, LLC | Texas, United States | 2020 | Environmental Scientist

Lynnbrook Avenue Park and Stream Restoration | City of Chattanooga | Chattanooga, Tennessee, United States | 2020-2021 | Biologist/Assistant Project Manager.

Boeing - Project Edwards | Boeing | Nashville/LaVergne, TN | 2019 | Environmental Scientist

Shane Kelley TN-QHP

Environmental Scientist
10 years of experience · Louisville, Kentucky

Shane serves as an Environmental Scientist in Stantec's Ecological Restoration Group. Currently his experience includes GIS mapping, wetland delineation, asbestos and other hazardous materials surveys, Phase I and II ESA's, and vegetation assessments. In addition, he has experience working with the Endangered Species Act specifically dealing with the management and protection of Indiana (Myotis sodalis) and Northern long-eared bats (Myotis septentrionalis). He also has experience in environmental compliance management and has assisted with the Environmental Compliance and Mitigation Plan for the Ohio River Downtown Bridge in Louisville, Kentucky.

EDUCATION

BS, Natural Resource and Environmental Science,
University of Kentucky, Lexington, Kentucky, United States, 2014

CERTIFICATIONS & TRAINING

OSHA: 10 Hour Construction Industry, Pure Safety,
OSHA, Kentucky, 2017

40-hour HAZWOPER Training, Compliance Solutions,
Online, United States, 2018

ACI Level I, Kentucky Ready Mix Concrete Association,
Frankfort, Kentucky, United States, 2015

Asbestos Inspector, Department for Environmental
Protection, Louisville, Kentucky, United States, 2018

MBI Wetland Delineation Training Course, Midwest
Biodiversity Institute, Columbus, Ohio, United States,
2019

APNGA Portable Nuclear Gauge Safety Class & U.S.
D.O.T Hazmat Certification, American Portable Nuclear
Gauge Association, Louisville, Kentucky, United States,
2018

REGISTRATIONS

Asbestos Inspector #I17-11-7196, Commonwealth of
Kentucky, 11/06/2018-11/06/2019

Asbestos Inspector #A-I-104368-69385, State of
Tennessee, 12/01/2018-06/30/2019

PROJECT EXPERIENCE

PHASE I & II ENVIRONMENTAL SITE ASSESSMENTS

Ashwood Solar Project | RWE Renewables | Lyon County,
KY, USA | 2020-2021 | Team Lead

To assist RWE with the development of a solar farm in Lyon County, Kentucky, Shane wrote a Critical Impact Analysis to determine critical permitting and development issues for the proposed site. The report reviewed Project site development issues that relate to a variety of disciplines including: federally jurisdictional Waters (wetlands or waterbodies) of the United States (WOUS); 100-year floodplains; National Pollutant Discharge and Elimination System (NPDES) construction storm water permitting; rare, threatened and endangered (T&E) species; spill prevention, control and countermeasures; potentially contaminated soil or groundwater; cultural and historic resources; potential air quality concerns; and applicable local government requirements. Additionally, Shane coordinated field teams to conduct a Phase I ESA site visit to determine any potential Recognized Environmental Conditions for the site and reviewed the narrative report for submittal to the client.

Ford Custom Classic Homes Lewisburg Pike Phase I ESA
| Ford Custom Classic Homes | Williamson County,
Tennessee | 2018-2019 | Environmental Scientist

Prepared a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review of the approximately 312-acre site. Coordinated with site contacts and field crew to gather environmental site documentation and permits to determine any potential environmental concerns for the site. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client.

Confidential Client - Phase I ESA | Confidential | Spencer
and Joseph County, Indiana | Environmental Scientist

Conducted a desktop review and limited Phase I ESA on two project sites in compliance with ASTM E1527-13. Supplied the client with potential RECs identified during the desktop review and a estimate for cost of conducting a Phase II ESA on the site.

CSO Sewer Separation Phase I ESA | Cincinnati MSDGC | Reading, Ohio | Environmental Scientist

The Cincinnati MSDGC intended to purchase a permanent and temporary easement for a sewer system improvement in an industrial area of Reading, Ohio. Stantec was retained to design the sewer system improvement and conduct a Phase I ESA to determine potential liability with the project. Shane prepared a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review of the approximately 1,400-acre site. Coordinated with site contacts and field crew to gather environmental site documentation and permits to determine any potential environmental concerns for the site. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client. A number of RECs were identified within the project area and a Phase II investigation was recommended. Shane assisted in creating a sampling plan to assess the existence/extent of contamination within the project.

Centre College Harding Street Phase I ESA | Centre College | Danville, Kentucky | 2018 | Environmental Scientist

Centre College retained Stantec to conduct a Phase I ESA for a potential property acquisition in downtown Danville, Kentucky. Prepared a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review of the approximately 2-acre site. Coordinated with site contacts and field crew to gather environmental site documentation and permits to determine any potential environmental concerns for the site. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client. One REC was identified during the Phase I ESA regarding a former gas station located directly north of the property. Underground storage tanks were never removed and the potential for leaking petroleum was possible. Shane assisted in creating a sampling plan for a Phase II investigation to determine if/to what extent the impacts were that had occurred. The Phase II investigation revealed that leaking petroleum was flowing downgradient across the property, however, the impacts were below the regulatory threshold for contamination.

EC&R Win Solar Site | E.ON Climate & Renewables | Cross County, Arkansas | 2019 | Environmental Scientist

Prepared a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review of the approximately 1,400-acre site. Coordinated with site contacts and field crew to gather environmental site documentation and permits to determine any potential environmental concerns for the site. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client.

EC&R Evergreen Solar Site - Phase I Environmental Site Assessment | E.ON Climate and Renewables | Soperton, Georgia | 2018 | Environmental Scientist

Prepared a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review. Coordinated with site contacts and field crew to gather environmental site documentation and permits to determine any potential environmental concerns for the site. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client.

Terraform Golden Crescent Solar Site | TerraForm Power Corp. | Lexington, North Carolina | 2018 | Environmental Scientist

Prepared a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review. Coordinated with site contacts and field crew to gather environmental site documentation and permits to determine any potential environmental concerns for the site. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client.

Ecoplexus Interlachen Solar Site | Ecoplexus, Inc. | Interlachen, Florida | 2018 | Environmental Scientist

Prepared a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review. Coordinated with site contacts and field crew to gather environmental site documentation and permits to determine any potential environmental concerns for the site. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client.

Ecoplexus Haines Creek Solar Site | Ecoplexus, Inc. | Leesburg, Florida | 2018 | Environmental Scientist

Prepared a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review. Coordinated with site contacts and field crew to gather environmental site documentation and permits to determine any potential environmental concerns for the site. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client.

EC&R Coalburg Solar Site - Phase I Environmental Site Assessment | E.ON Climate & Renewables | Birmingham, Alabama | 2017 | Environmental Scientist

Conducted a Phase I Environmental Site Assessment field visit at the approximately 792-acre site. Coordinated with site contacts to gather environmental site documentation and permits to determine any potential environmental concerns for the site. Prepared a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client.

EC&R Concho Ranch Solar Site - Phase I Environmental Site Assessment | E.ON Climate & Renewables | San Angelo, Texas | 2018 | Environmental Scientist

Prepared a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review. Coordinated with site contacts and field crew to gather environmental site documentation and permits to determine any potential environmental concerns for the site. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client.

EC&R Thunderbolt Solar Site - Phase I Environmental Site Assessment | E.ON Climate & Renewables | Valdosta, Georgia | 2018 | Environmental Scientist

Prepared a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review. Coordinated with site contacts and field crew to gather environmental site documentation and permits to determine any potential environmental concerns for the site. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client.

EC&R Wiregrass Solar Site - Phase I Environmental Site Assessment | E.ON Climate & Renewables | Ashburn, Georgia | 2018 | Environmental Scientist

Prepared a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review. Coordinated with site contacts and field crew to gather environmental site documentation and permits to determine any potential environmental concerns for the site. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client.

Distribution Center - Phase I Environmental Site Assessment | Confidential Client | Charleston, Tennessee | 2018 | Environmental Scientist

Conducted a Phase I Environmental Site Assessment field visit at the approximately 80-acre site. Coordinated with site contacts to gather environmental site documentation and permits to determine any potential environmental concerns for the site. Prepared a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client.

Confidential Client - Phase I Environmental Site Assessment | Confidential Client | Charlottesville, Virginia | 2018 | Environmental Scientist

Conducted a Phase I Environmental Site Assessment field visit at the approximately 57.7-acre site. Coordinated with site contacts to gather environmental site documentation and permits to determine any potential environmental concerns for the site. Prepared a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client.

KYTC KY-32 Expansion - Phase I Environmental Site Assessment | Kentucky Transportation Council (KYTC) | Morehead, Kentucky | 2017-2018 | Environmental Scientist

Conducted a Phase I Environmental Site Assessment field visit at the approximately 75.6-acre linear corridor site from the intersection of Viking Drive and Hickory Drive northwest of Morehead, Kentucky. Coordinated with site contacts and interviewed land owners to gather environmental site documentation and permits to determine any potential environmental concerns for the site. Prepared a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client.

EC&R Diamond Solar Site | E.ON Climate & Renewables | Osceola, Arkansas | 2019 | Environmental Scientist

Prepared a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review of the approximately 645-acre site. Coordinated with site contacts and field crew to gather environmental site documentation and permits to determine any potential environmental concerns for the site. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client.

EC&R Antlers Road Solar Project | E.ON Climate & Renewables | Mecklenburg County, Virginia | 2018 | Environmental Scientist

Prepared a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review of the approximately 1,000-acre site. Coordinated with site contacts and field crew to gather environmental site documentation and permits to determine any potential environmental concerns for the site. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client.

EC&R Bakers Pond Solar Project | E.ON Climate & Renewables | Prince George County, Virginia | 2018 | Environmental Scientist

Prepared a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review of the approximately 800-acre site. Coordinated with site contacts and field crew to gather environmental site documentation and permits to determine any potential environmental concerns for the site. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client.

EC&R Blue Rock Solar Project | E.ON Climate & Renewables | Buckingham and Cumberland Counties, Virginia | 2019 | Environmental Scientist

Prepared a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review of the approximately 830-acre site. Coordinated with site contacts and field crew to gather environmental site documentation and permits to determine any potential environmental concerns for the site. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client.

EC&R Cabin Point Solar Project | E.ON Climate & Renewables | Prince George and Sussex Counties, Virginia | 2019 | Environmental Scientist

Prepared a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review of the approximately 1,200-acre site. Coordinated with site contacts and field crew to gather environmental site documentation and permits to determine any potential environmental concerns for the site. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client.

Tennessee American Water, Whitwell Site - Phase I Environmental Site Assessment | Tennessee American Water | Whitwell, Tennessee | 2018 | Environmental Scientist

Conducted a Phase I Environmental Site Assessment field visit at the approximately 1.7-acre site. Coordinated with site contacts to gather environmental site documentation and permits to determine any potential environmental concerns for the site. Prepared a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client.

KYTC Mountain Parkway Expansion - Phase I & II Environmental Site Assessment | Kentucky Transportation Council | Salyersville, Kentucky | Environmental Scientist

Conducted a Phase I Environmental Site Assessment field visit at the linear corridor site designated by KYTC. Coordinated with site contacts and interviewed surrounding landowners to gather environmental site documentation and permits to determine any potential environmental concerns for the site. Prepared a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client. Conducted a Phase II Environmental Site Assessment to delineate potential soil contamination on the site and coordinated efforts to remediate contaminated soil surrounding several above-ground storage tanks where petroleum contamination occurred. Prepared a report and maps to document the findings of the Phase II Environmental Site Assessment.

EC&R Persistence Solar Site - Phase I Environmental Site Assessment | E.ON Climate & Renewables | Ashburn, Georgia | 2018 | Environmental Scientist

Prepared a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review. Coordinated with site contacts and field crew to gather environmental site documentation and permits to determine any potential environmental concerns for the site. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client.

KYTC Route US-150 Improvement Phase I ESA | KYTC | Bardstown, Kentucky | 2019 | Environmental Scientist

Conducted a Phase I Environmental Site Assessment field visit at the approximately 5-mile linear corridor site locate east of Bardstown, KY. Coordinated with site contacts and interviewed land owners to gather environmental site documentation and permits to determine any potential environmental concerns for the site. Prepared a Phase I ESA report, photo log, and figures documenting the findings of the site visit and historical records review. Used Project-Specific Scope of Work for compliance with policy, principles, and procedures, and prepare report using appropriate technical guidance and checklists to meet the needs and requirements of the client.

Mountain Parkway Expansion, Phase I and II Environmental Site Assessments | KYTC | Salyersville, Kentucky | 2014-2016

KYTC plans to expand 46 miles of the Mountain Parkway from 2 lanes to 4 lanes with a suicide lane. Stantec completed the environmental work for the preliminary portion of the project. Shane helped with the data collection of potentially contaminated sites where soil remediation may need to take place as well as UST removal. In addition he made several site visits to meet with KYTC representatives to discuss aspects of the project. In addition, Shane assisted in writing Phase I and II ESA's.

APPENDIX C

USER PROVIDED RECORDS

ASTM 1527-13 Phase I ESA USER QUESTIONNAIRE

Property Address/Location: Marion County, Kentucky

Type of Property: Proposed solar project sited on predominantly agricultural land

Type of Transaction (property acquisition, refinance, lease, etc): Lease, easement, and option to purchase

Why is a Phase I ESA required: Knowledge qualifier and reliance for sale of project assets

Identification of all reliant parties: EDF Renewables and EKPC

The User must provide the following information (if available) to the *environmental professional*. Failure to provide this information could result in a determination that “*all appropriate inquiry*” is not complete.

1) Environmental cleanup liens that are filed or recorded against the site: Are you aware of any environmental cleanup liens that are filed or recorded under federal, tribal, state or local law?

No

2) Activity and land use limitations (AUL) that are in place on the site or that have been filed or recorded: Are you aware of any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state, or local law?

- Landowner: SNS Rentals LLC
 - APN: 070-003 (Tract 2)
 - Instrument: Restrictive Covenants
 - Recording Date: 9/28/2017
 - Recording Info: Book 320, Page 630
 - Additional Recorded Docs: Book 201, Page 673
- Landowner: Murphy Family Trust
 - APN: 063-017 (Tract 2)
 - Instrument: Covenants, Conditions and/or Restrictions
 - Recording Date: 6/4/1997
 - Recording Info: Book 193, Page 24
- Landowner: Jimmy & Aileen Thompson
 - APN: 064-002
 - Instrument: Plat/Survey containing Conditions and Easements
 - Recording Date: 11/4/2002
 - Recording Info: Book 231 Page 666
- Landowner: Edward D. Luckett
 - APN: 064-001A
 - Instrument: Covenants, Conditions and/or Restrictions as recited in Deed
 - Recording Date: 8/22/1988
 - Recording Info: Book 148, Page 444
- Landowner: Charles & Paula Brussel
 - APN: 064-002-03
 - Instrument: Covenants, Conditions and/or Restrictions as recited in Deed
 - Recording Date: 1/8/2003
 - Recording Info: Book 233, Page 273
- Landowner: Charles & Paula Brussel
 - APN: 064-002-03
 - Instrument: Covenants, Conditions and/or Restrictions as recited in Deed

ASTM 1527-13 Phase I ESA USER QUESTIONNAIRE

- Recording Date: 3/22/2004
- Recording Info: Book 242, Page 734

- Landowner: Charles & Paula Brussel
 - APN: 064-002-03
 - Instrument: Plat/Survey containing Conditions and Easements
 - Recording Date: 11/4/2002
 - Recording Info: Book 231 Page 666

3) Specialized knowledge or experience of the person seeking to qualify for Landowner Liability Protection (LLP): As the user if this ESA do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

No

4) Relationship of the purchase price to the fair market value of the property if it were not contaminated: Does the purchase price being paid for this property reasonably reflect the fair market value of the property? If you conclude that there is no difference, have you considered whether the lower purchase price is because contamination is known or believed to be present on the property?

Not applicable

5) Commonly known or reasonably ascertainable information about the property: Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, as user,

- Do you know the past uses of the property?

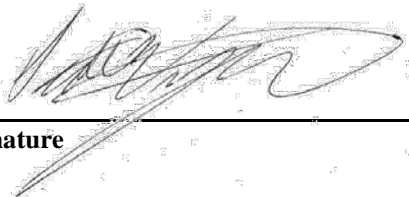
- Do you know of specific chemicals that are present or once were present at the property?

- Do you know of spills or other chemical releases that have taken place at the property?

- Do you know of any environmental cleanups that have taken place at the property?

We have no knowledge of any of the above

6) The degree of obviousness of the presence or likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation: As the user of this ESA, based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of contamination at the property?



Signature

Associate Director - Development

Title

Scott Wentzell

1/23/2024

Name of User Completing Form (print)

Date

APPENDIX D ENVIRONMENTAL AGENCY DATABASE SEARCH REPORT

Northern Bobwhite Phase 1

Northern Bobwhite Phase 1
Springfield, KY 40069

Inquiry Number: 7566597.8s
February 13, 2024

EDR Area / Corridor Report



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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527 - 21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E2247 - 16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E1528 - 22) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

SUBJECT PROPERTY INFORMATION

ADDRESS

NORTHERN BOBWHITE PHASE 1
SPRINGFIELD, KY 40069

TARGET PROPERTY SEARCH RESULTS

The Target Property was identified in the following databases.

Page Numbers and Map Identifications refer to the EDR Area/Corridor Report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Page Numbers and Map Identifications refer to the EDR Area/Corridor Report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Lists of state- and tribal hazardous waste facilities

SHWS: State Leads List

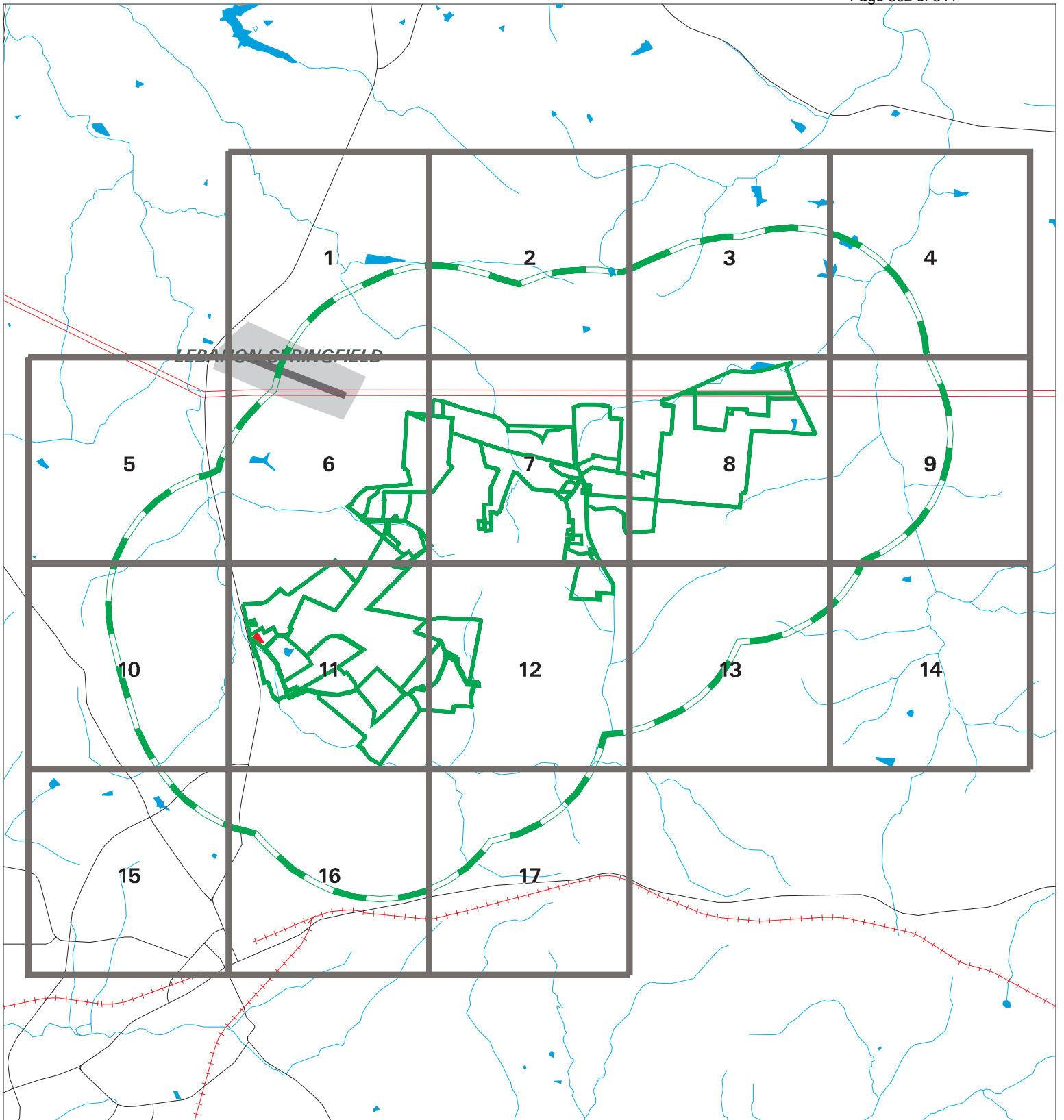
A review of the SHWS list, as provided by EDR, and dated 11/27/2023 has revealed that there is 1 SHWS site within approximately 1 mile of the requested target property.

<u>Site</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
LG&E KENTUCKY UTILIT Facility Id: 136520 Facility Status: Closed	RADIO STATION ROAD	NE 0 - 1/8 (0.034 mi.)	1 / 11	40

MAPPED SITES SUMMARY

Target Property:
NORTHERN BOBWHITE PHASE 1
SPRINGFIELD, KY 40069

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
1 / 11	LG&E KENTUCKY UTILIT	RADIO STATION ROAD	SHWS	181 0.034 NE



- ▲ Sites
- ▬ Target Property
- ▬ Search Buffer
- ▬ Focus Map - No Sites
- ▬ Focus Map - Sites
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA



<p>SITE NAME: Northern Bobwhite Phase 1 ADDRESS: Northern Bobwhite Phase 1 CITY/STATE: Springfield KY ZIP: 40069</p>	<p>CLIENT: Stantec CONTACT: Lucas Downs INQUIRY #: 7566597.8s DATE: 02/13/24</p>
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9:43 AM

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
<u>STANDARD ENVIRONMENTAL RECORDS</u>								
<i>Lists of Federal NPL (Superfund) sites</i>								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
<i>Lists of Federal Delisted NPL sites</i>								
Delisted NPL	1.000		0	0	0	0	NR	0
<i>Lists of Federal sites subject to CERCLA removals and CERCLA orders</i>								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
<i>Lists of Federal CERCLA sites with NFRAP</i>								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
<i>Lists of Federal RCRA facilities undergoing Corrective Action</i>								
CORRACTS	1.000		0	0	0	0	NR	0
<i>Lists of Federal RCRA TSD facilities</i>								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
<i>Lists of Federal RCRA generators</i>								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
<i>Federal institutional controls / engineering controls registries</i>								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
<i>Federal ERNS list</i>								
ERNS	TP		NR	NR	NR	NR	NR	0
<i>Lists of state- and tribal hazardous waste facilities</i>								
SHWS	1.000		1	0	0	0	NR	1
<i>Lists of state and tribal landfills and solid waste disposal facilities</i>								
SWF/LF	0.500		0	0	0	NR	NR	0
<i>Lists of state and tribal leaking storage tanks</i>								
PSTEAF	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
SB193	0.500		0	0	0	NR	NR	0
<i>Lists of state and tribal registered storage tanks</i>								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
<i>State and tribal institutional control / engineering control registries</i>								
ENG CONTROLS	0.500		0	0	0	NR	NR	0
INST CONTROL	0.500		0	0	0	NR	NR	0
<i>Lists of state and tribal voluntary cleanup sites</i>								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
<i>Lists of state and tribal brownfield sites</i>								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
<u>ADDITIONAL ENVIRONMENTAL RECORDS</u>								
<i>Local Brownfield lists</i>								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
<i>Local Lists of Landfill / Solid Waste Disposal Sites</i>								
SWRCY	0.500		0	0	0	NR	NR	0
HIST LF	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
<i>Local Lists of Hazardous waste / Contaminated Sites</i>								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
<i>Local Land Records</i>								
LIENS 2	TP		NR	NR	NR	NR	NR	0
<i>Records of Emergency Release Reports</i>								
HMIRS	TP		NR	NR	NR	NR	NR	0
SPILLS	TP		NR	NR	NR	NR	NR	0
<i>Other Ascertainable Records</i>								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
MINES MRDS	0.250		0	0	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
PFAS NPL	0.250		0	0	NR	NR	NR	0
PFAS FEDERAL SITES	0.250		0	0	NR	NR	NR	0
PFAS TRIS	0.250		0	0	NR	NR	NR	0
PFAS TSCA	0.250		0	0	NR	NR	NR	0
PFAS RCRA MANIFEST	0.250		0	0	NR	NR	NR	0
PFAS ATSDR	0.250		0	0	NR	NR	NR	0
PFAS WQP	0.250		0	0	NR	NR	NR	0
PFAS NPDES	0.250		0	0	NR	NR	NR	0
PFAS ECHO	0.250		0	0	NR	NR	NR	0
PFAS ECHO FIRE TRAINING	0.250		0	0	NR	NR	NR	0
PFAS PART 139 AIRPORT	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM NRC	0.250		0	0	NR	NR	NR	0
BIOSOLIDS	TP		NR	NR	NR	NR	NR	0
PFAS	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
AIRS	TP		NR	NR	NR	NR	NR	0
ASBESTOS	TP		NR	NR	NR	NR	NR	0
COAL ASH	0.500		0	0	0	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
LEAD	TP		NR	NR	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
UST FINDER RELEASE	0.500		0	0	0	NR	NR	0
UST FINDER	0.250		0	0	NR	NR	NR	0
<u>EDR HIGH RISK HISTORICAL RECORDS</u>								
<i>EDR Exclusive Records</i>								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
<u>EDR RECOVERED GOVERNMENT ARCHIVES</u>								
<i>Exclusive Recovered Govt. Archives</i>								
RGA HWS	TP		NR	NR	NR	NR	NR	0
RGA LF	TP		NR	NR	NR	NR	NR	0
- Totals --		0	1	0	0	0	0	1











NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database



- | | | | | | |
|--|----------------------|---|-------------------|---|------------------------------|
|  | Sites |  | Focus Map - Sites |  | Dept. Defense Sites |
|  | Target Property |  | Power Line |  | Indian Reservations BIA |
|  | Search Buffer |  | Pipe Line |  | National Priority List Sites |
|  | Focus Map - No Sites | | | | |



SITE NAME: Northern Bobwhite Phase 1
 ADDRESS: Northern Bobwhite Phase 1
 CITY/STATE: Springfield KY
 ZIP: 40069

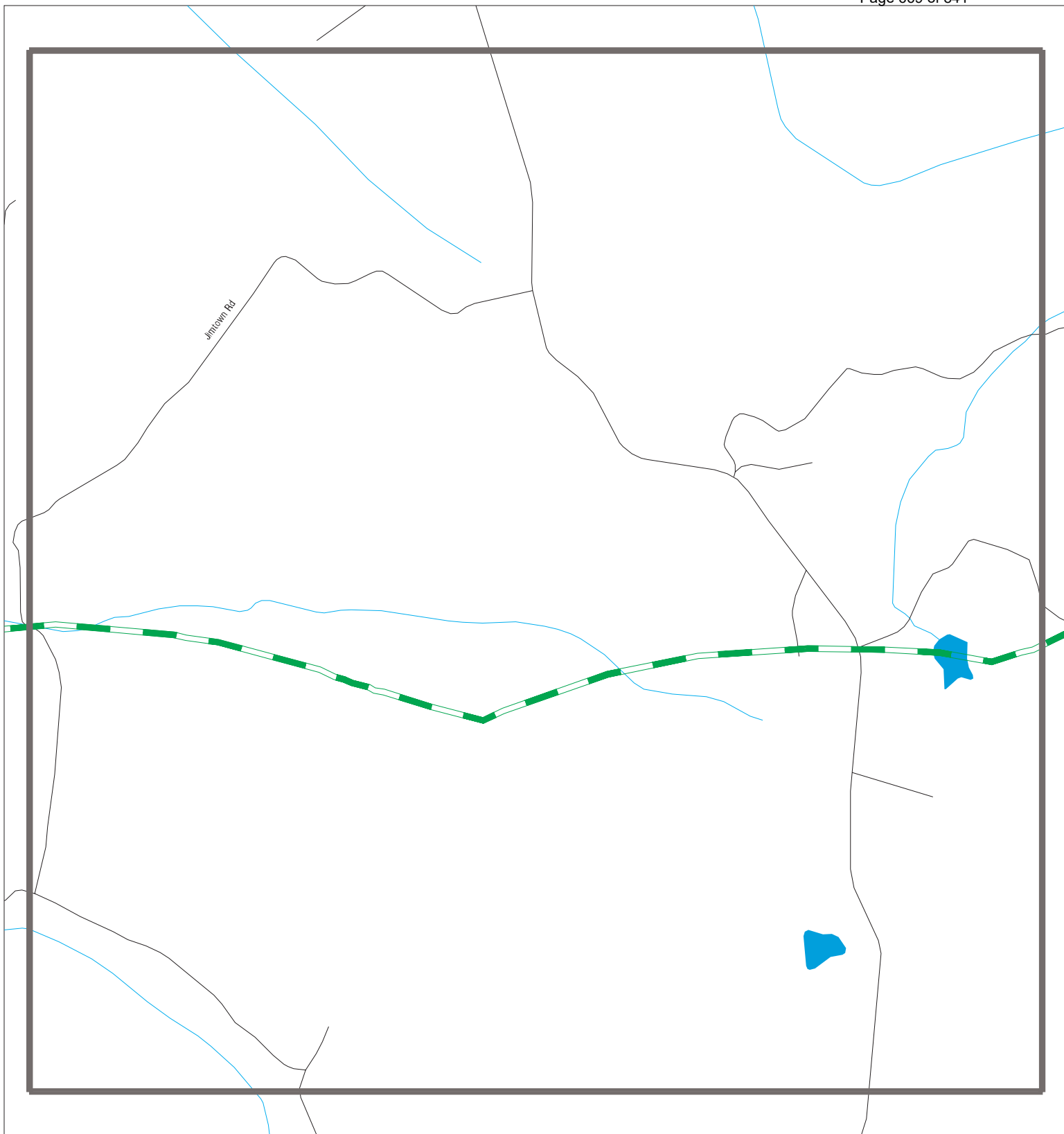
CLIENT: Stantec
 CONTACT: Lucas Downs
 INQUIRY #: 7566597.8s
 DATE: 02/13/24

MAPPED SITES SUMMARY - FOCUS MAP 1

Target Property:
NORTHERN BOBWHITE PHASE 1
SPRINGFIELD, KY 40069

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
-----------------------	-----------	---------	-------------------	-------------------------------

NO MAPPED SITES FOUND



- ▲ Sites
- / / Focus Map - Sites
- Dept. Defense Sites
- / / Target Property
- / / Power Line
- Indian Reservations BIA
- / / Search Buffer
- / / Pipe Line
- / / Focus Map - No Sites
- National Priority List Sites



SITE NAME: Northern Bobwhite Phase 1
 ADDRESS: Northern Bobwhite Phase 1
 CITY/STATE: Springfield KY
 ZIP: 40069

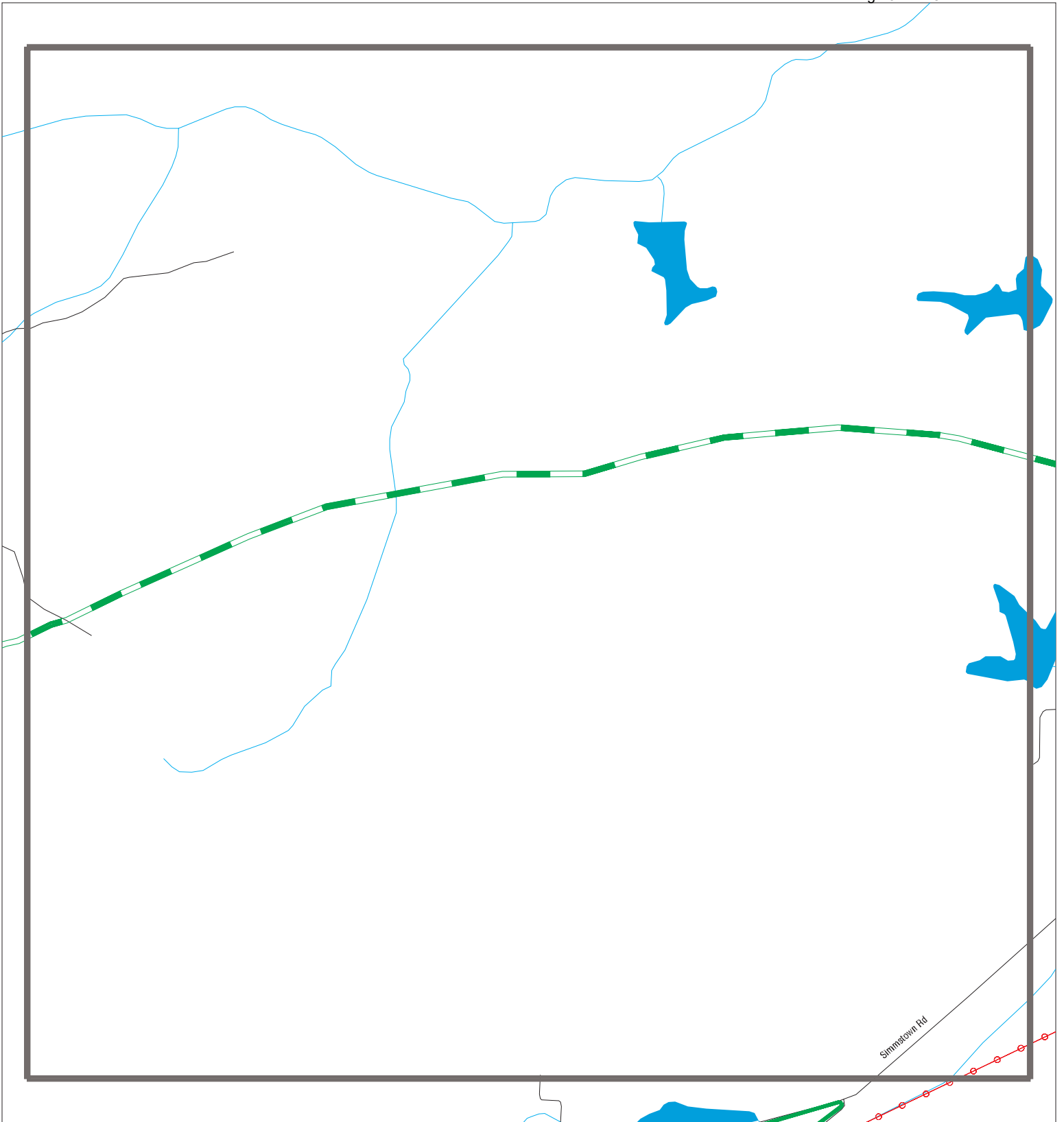
CLIENT: Stantec
 CONTACT: Lucas Downs
 INQUIRY #: 7566597.8s
 DATE: 02/13/24

MAPPED SITES SUMMARY - FOCUS MAP 2

Target Property:
NORTHERN BOBWHITE PHASE 1
SPRINGFIELD, KY 40069

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
-----------------------	-----------	---------	-------------------	-------------------------------

NO MAPPED SITES FOUND



- | | | |
|----------------------|------------------------------|-------------------------|
| Sites | Focus Map - Sites | Dept. Defense Sites |
| Target Property | Power Line | Indian Reservations BIA |
| Search Buffer | Pipe Line | |
| Focus Map - No Sites | National Priority List Sites | |



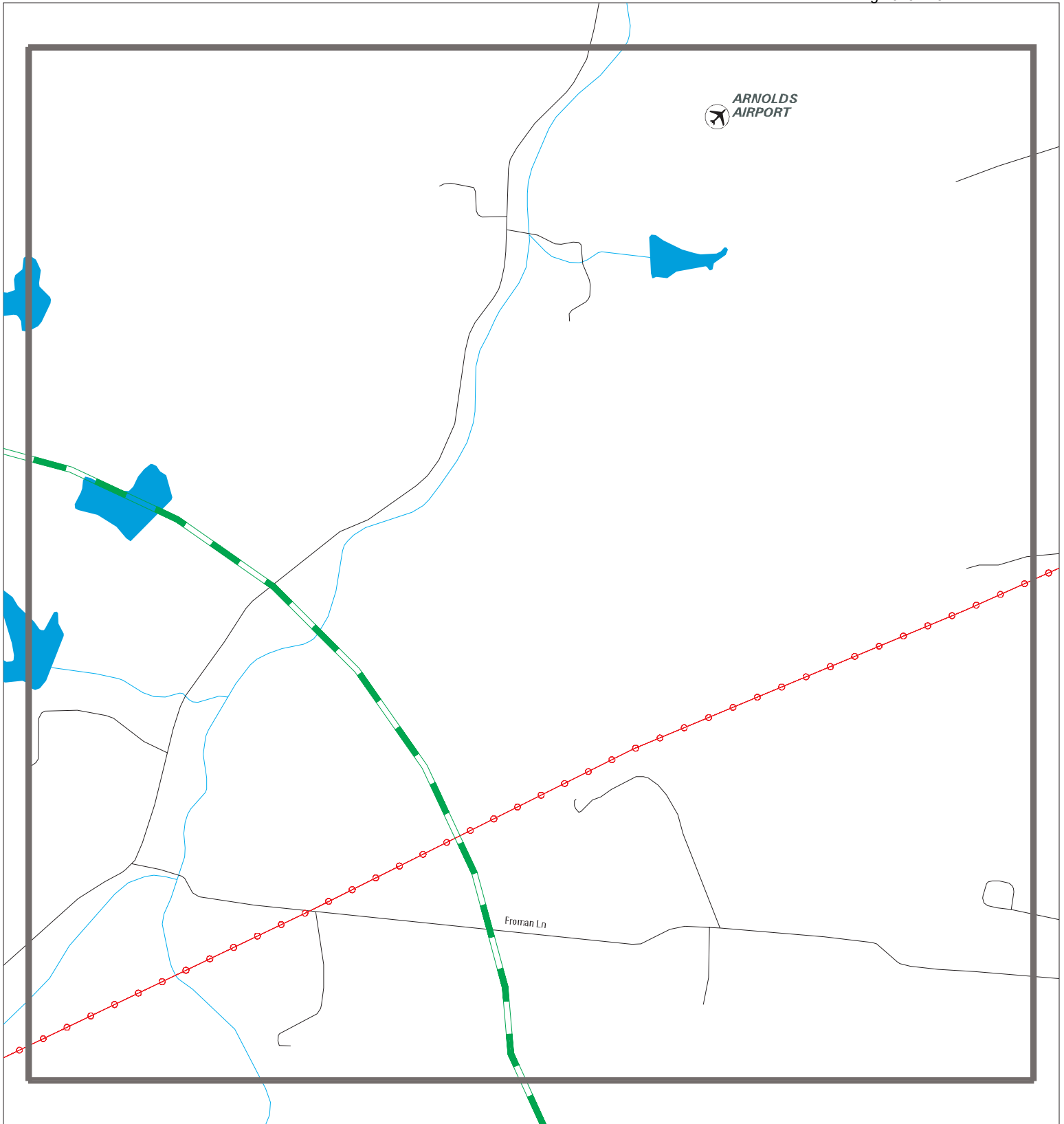
<p>SITE NAME: Northern Bobwhite Phase 1 ADDRESS: Northern Bobwhite Phase 1 CITY/STATE: Springfield KY ZIP: 40069</p>	<p>CLIENT: Stantec CONTACT: Lucas Downs INQUIRY #: 7566597.8s DATE: 02/13/24</p>
--	--

MAPPED SITES SUMMARY - FOCUS MAP 3

Target Property:
NORTHERN BOBWHITE PHASE 1
SPRINGFIELD, KY 40069

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
-----------------------	-----------	---------	-------------------	-------------------------------

NO MAPPED SITES FOUND



- | | | |
|----------------------|------------------------------|-------------------------|
| Sites | Focus Map - Sites | Dept. Defense Sites |
| Target Property | Power Line | Indian Reservations BIA |
| Search Buffer | Pipe Line | |
| Focus Map - No Sites | National Priority List Sites | |



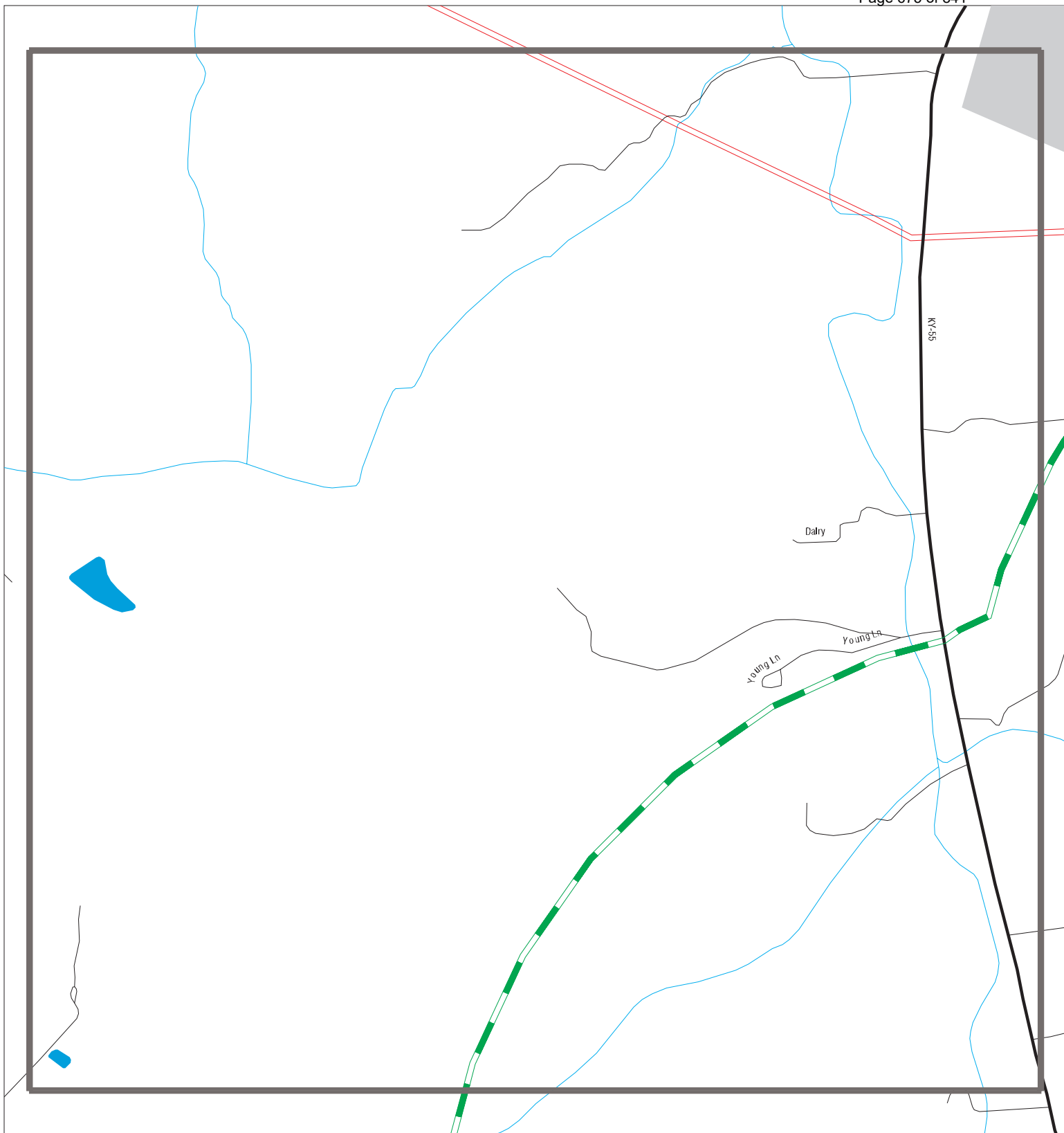
<p>SITE NAME: Northern Bobwhite Phase 1 ADDRESS: Northern Bobwhite Phase 1 CITY/STATE: Springfield KY ZIP: 40069</p>	<p>CLIENT: Stantec CONTACT: Lucas Downs INQUIRY #: 7566597.8s DATE: 02/13/24</p>
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MAPPED SITES SUMMARY - FOCUS MAP 4

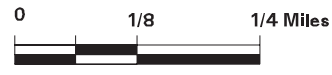
Target Property:
NORTHERN BOBWHITE PHASE 1
SPRINGFIELD, KY 40069

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
-----------------------	-----------	---------	-------------------	-------------------------------

NO MAPPED SITES FOUND



- ▲ Sites
- Focus Map - Sites
- Dept. Defense Sites
- Target Property
- Power Line
- Indian Reservations BIA
- Search Buffer
- Pipe Line
- Focus Map - No Sites
- National Priority List Sites



SITE NAME: Northern Bobwhite Phase 1
ADDRESS: Northern Bobwhite Phase 1
CITY/STATE: Springfield KY
ZIP: 40069

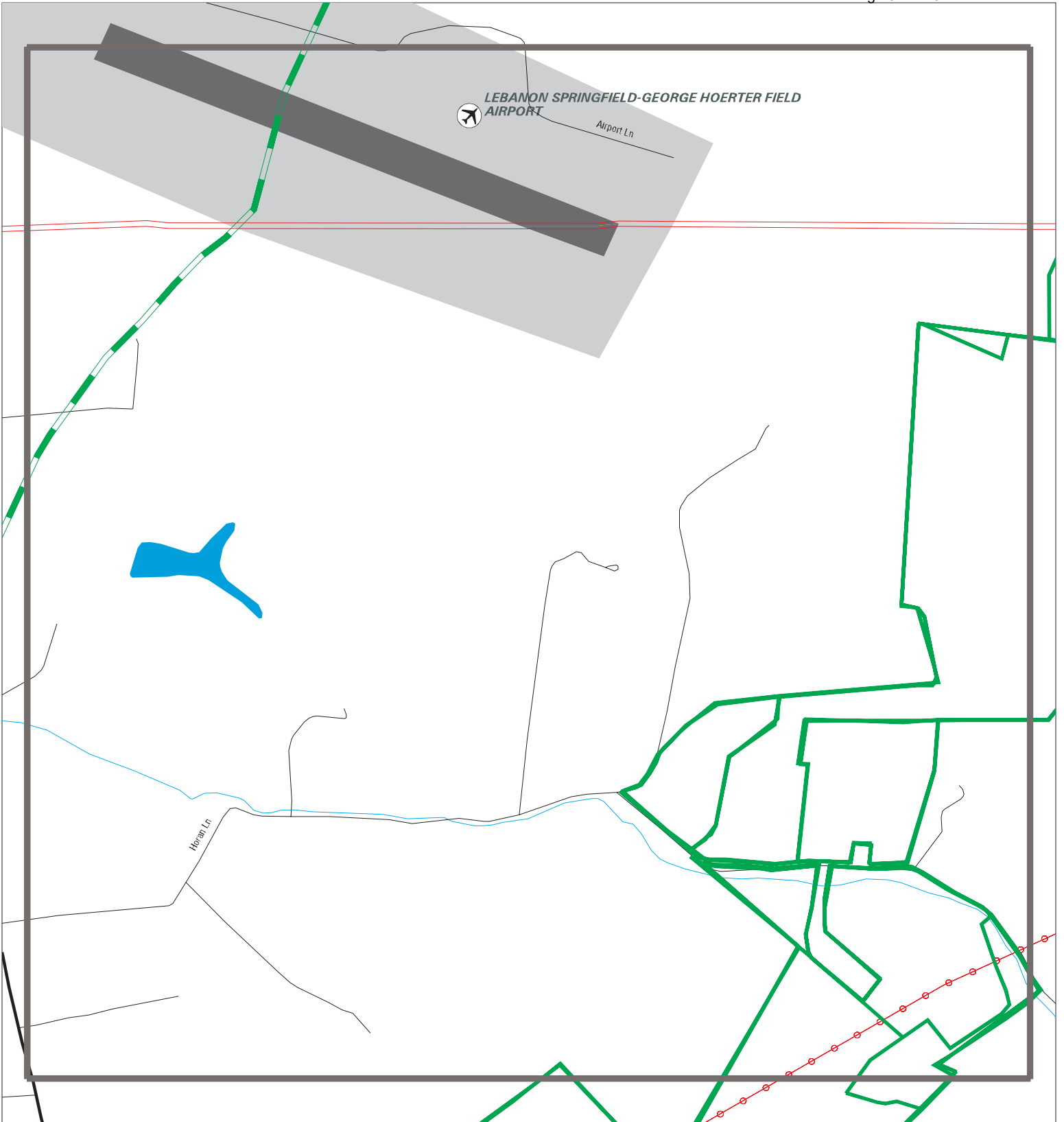
CLIENT: Stantec
CONTACT: Lucas Downs
INQUIRY #: 7566597.8s
DATE: 02/13/24

MAPPED SITES SUMMARY - FOCUS MAP 5

Target Property:
NORTHERN BOBWHITE PHASE 1
SPRINGFIELD, KY 40069

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
-----------------------	-----------	---------	-------------------	-------------------------------

NO MAPPED SITES FOUND



LEBANON SPRINGFIELD-GEORGE HOERTER FIELD
AIRPORT

Airport Ln

Horn Ln

- ▲ Sites
- ▬ Target Property
- ▬ Search Buffer
- ▬ Focus Map - No Sites
- ▬ Focus Map - Sites
- ▬ Power Line
- ▬ Pipe Line
- Dept. Defense Sites
- Indian Reservations BIA
- National Priority List Sites



SITE NAME: Northern Bobwhite Phase 1
 ADDRESS: Northern Bobwhite Phase 1
 CITY/STATE: Springfield KY
 ZIP: 40069

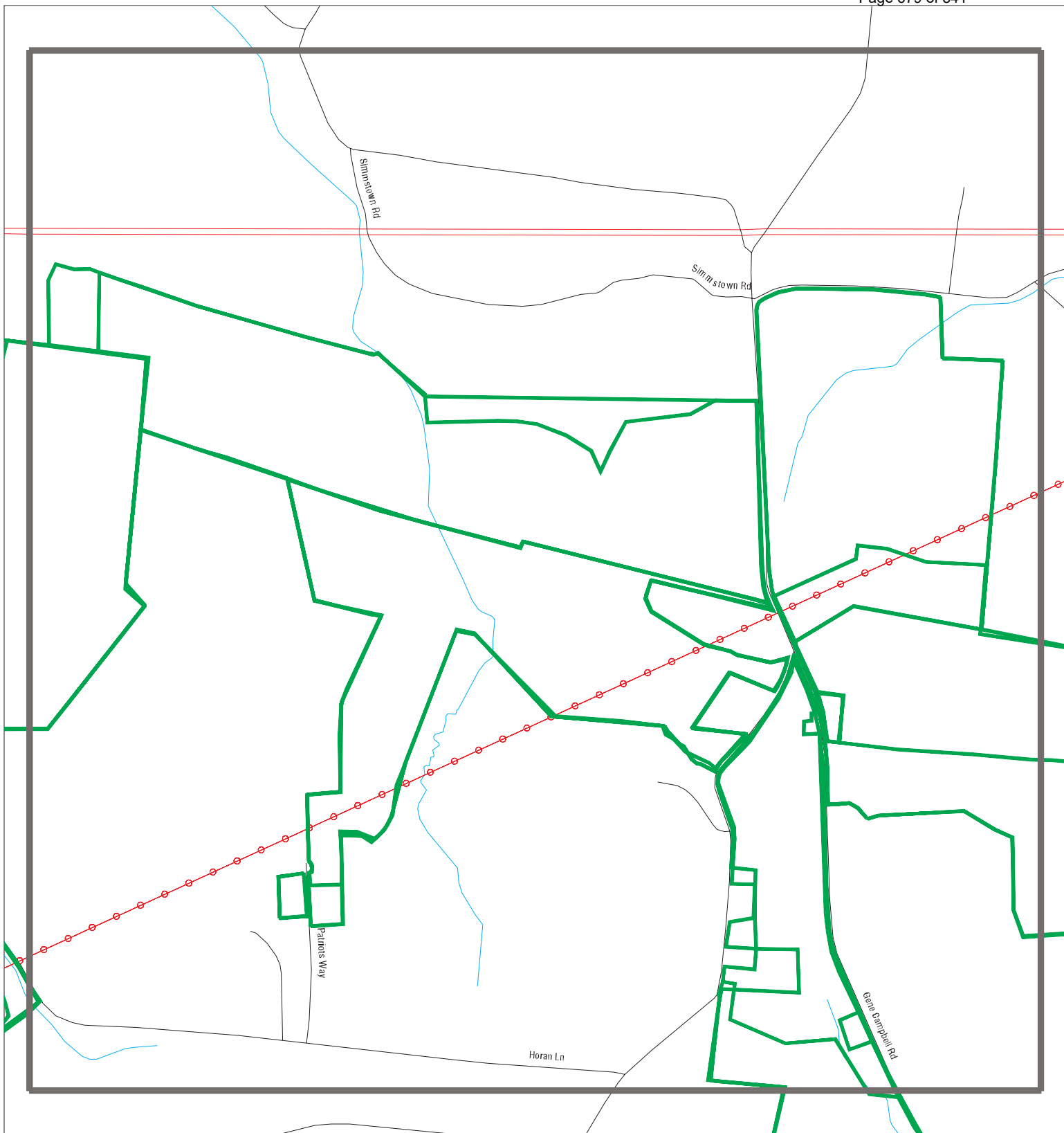
CLIENT: Stantec
 CONTACT: Lucas Downs
 INQUIRY #: 7566597.8s
 DATE: 02/13/24

MAPPED SITES SUMMARY - FOCUS MAP 6

Target Property:
NORTHERN BOBWHITE PHASE 1
SPRINGFIELD, KY 40069

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
-----------------------	-----------	---------	-------------------	-------------------------------

NO MAPPED SITES FOUND



- ▲ Sites
- ▬ Target Property
- ▬ Search Buffer
- ▬ Focus Map - No Sites
- ▬ Focus Map - Sites
- ▬ Power Line
- ▬ Pipe Line
- Dept. Defense Sites
- Indian Reservations BIA
- National Priority List Sites



SITE NAME: Northern Bobwhite Phase 1
 ADDRESS: Northern Bobwhite Phase 1
 CITY/STATE: Springfield KY
 ZIP: 40069

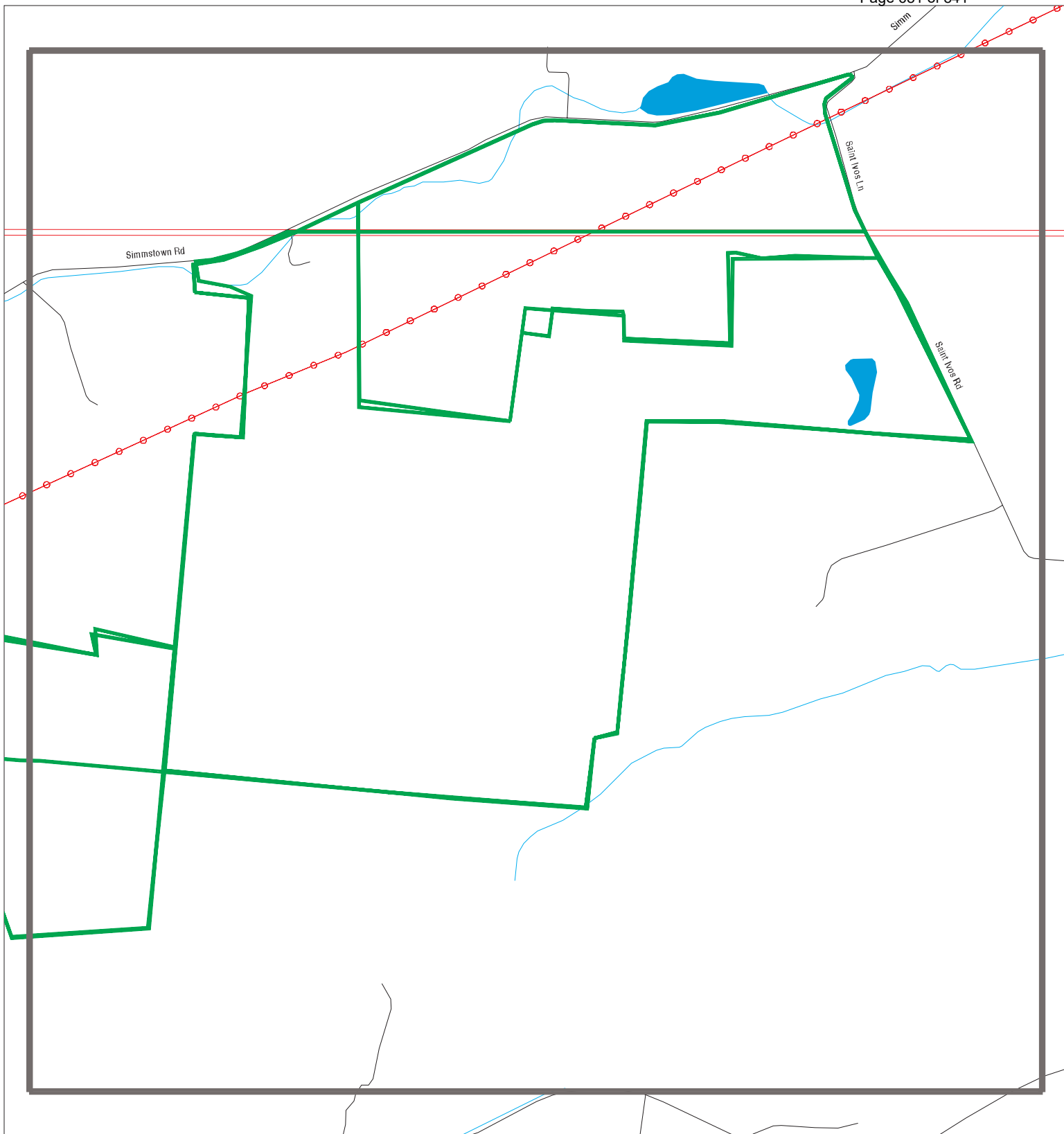
CLIENT: Stantec
 CONTACT: Lucas Downs
 INQUIRY #: 7566597.8s
 DATE: 02/13/24

MAPPED SITES SUMMARY - FOCUS MAP 7

Target Property:
NORTHERN BOBWHITE PHASE 1
SPRINGFIELD, KY 40069

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
-----------------------	-----------	---------	-------------------	-------------------------------

NO MAPPED SITES FOUND



- ▲ Sites
- ▬ Target Property
- ▬ Search Buffer
- ▬ Focus Map - No Sites
- ▬ Focus Map - Sites
- ▬ Power Line
- ▬ Pipe Line
- Dept. Defense Sites
- Indian Reservations BIA
- National Priority List Sites



SITE NAME: Northern Bobwhite Phase 1
 ADDRESS: Northern Bobwhite Phase 1
 CITY/STATE: Springfield KY
 ZIP: 40069

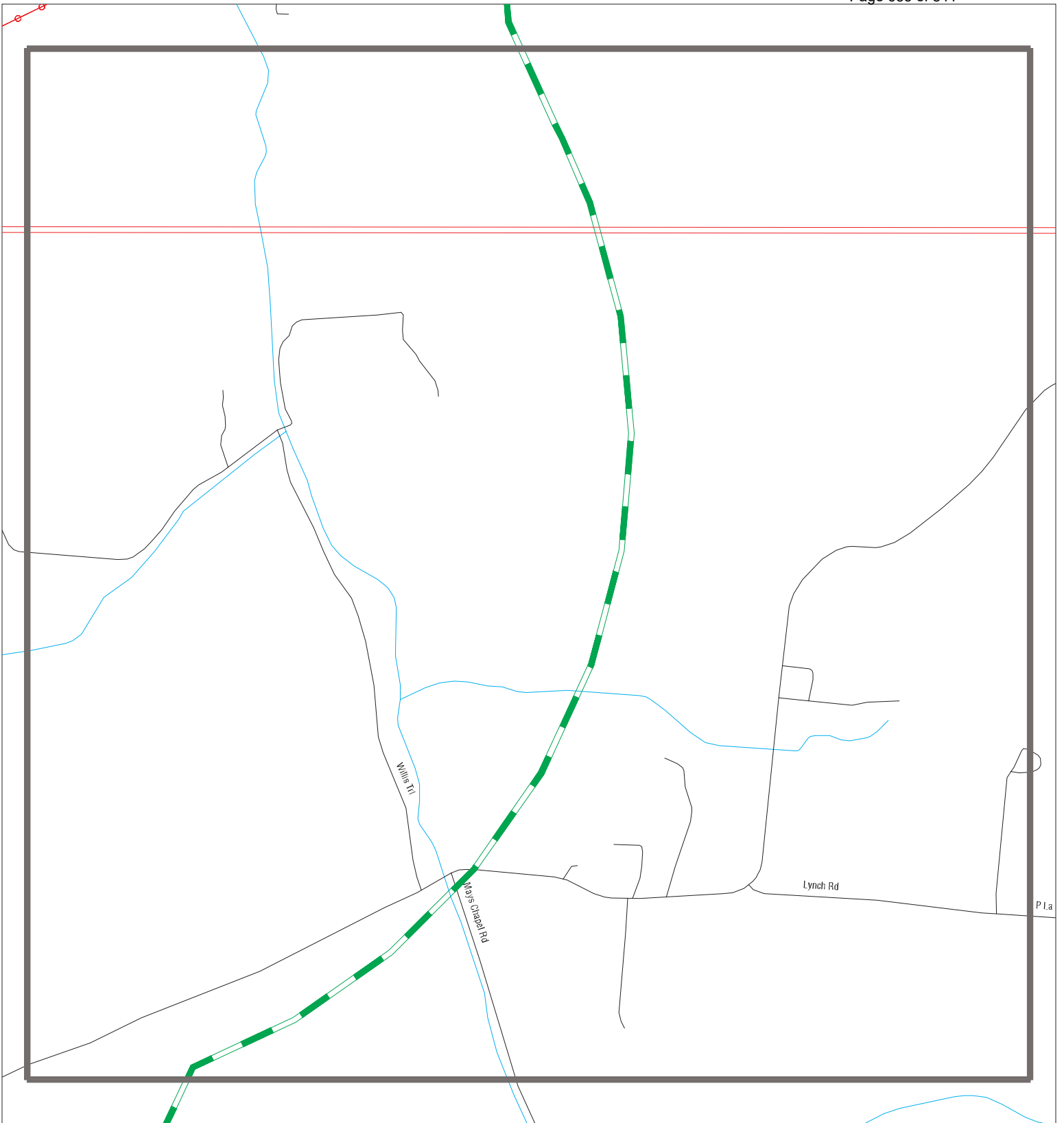
CLIENT: Stantec
 CONTACT: Lucas Downs
 INQUIRY #: 7566597.8s
 DATE: 02/13/24

MAPPED SITES SUMMARY - FOCUS MAP 8

Target Property:
NORTHERN BOBWHITE PHASE 1
SPRINGFIELD, KY 40069

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
-----------------------	-----------	---------	-------------------	-------------------------------

NO MAPPED SITES FOUND



- ▲ Sites
- ▬▬ Target Property
- ▬▬ Search Buffer
- ▬▬ Focus Map - No Sites
- ▬▬ Focus Map - Sites
- ⚡ Power Line
- ▬▬ Pipe Line
- Dept. Defense Sites
- Indian Reservations BIA
- National Priority List Sites



SITE NAME: Northern Bobwhite Phase 1
 ADDRESS: Northern Bobwhite Phase 1
 CITY/STATE: Springfield KY
 ZIP: 40069

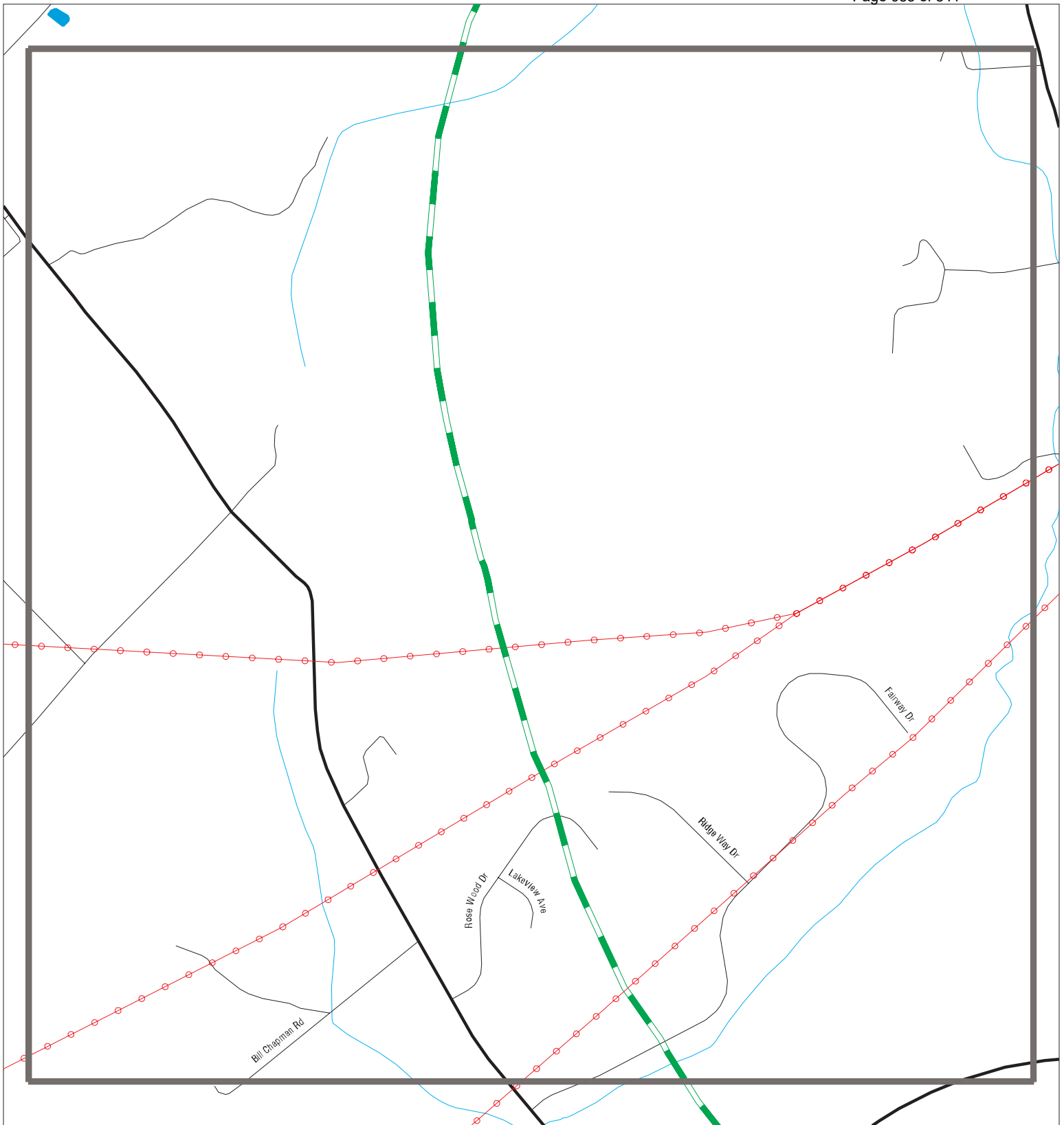
CLIENT: Stantec
 CONTACT: Lucas Downs
 INQUIRY #: 7566597.8s
 DATE: 02/13/24

MAPPED SITES SUMMARY - FOCUS MAP 9

Target Property:
NORTHERN BOBWHITE PHASE 1
SPRINGFIELD, KY 40069

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
-----------------------	-----------	---------	-------------------	-------------------------------

NO MAPPED SITES FOUND



- ▲ Sites
- - - Target Property
- - - Search Buffer
- - - Focus Map - No Sites
- - - Focus Map - Sites
- - - Power Line
- - - Pipe Line
- Dept. Defense Sites
- Indian Reservations BIA
- National Priority List Sites



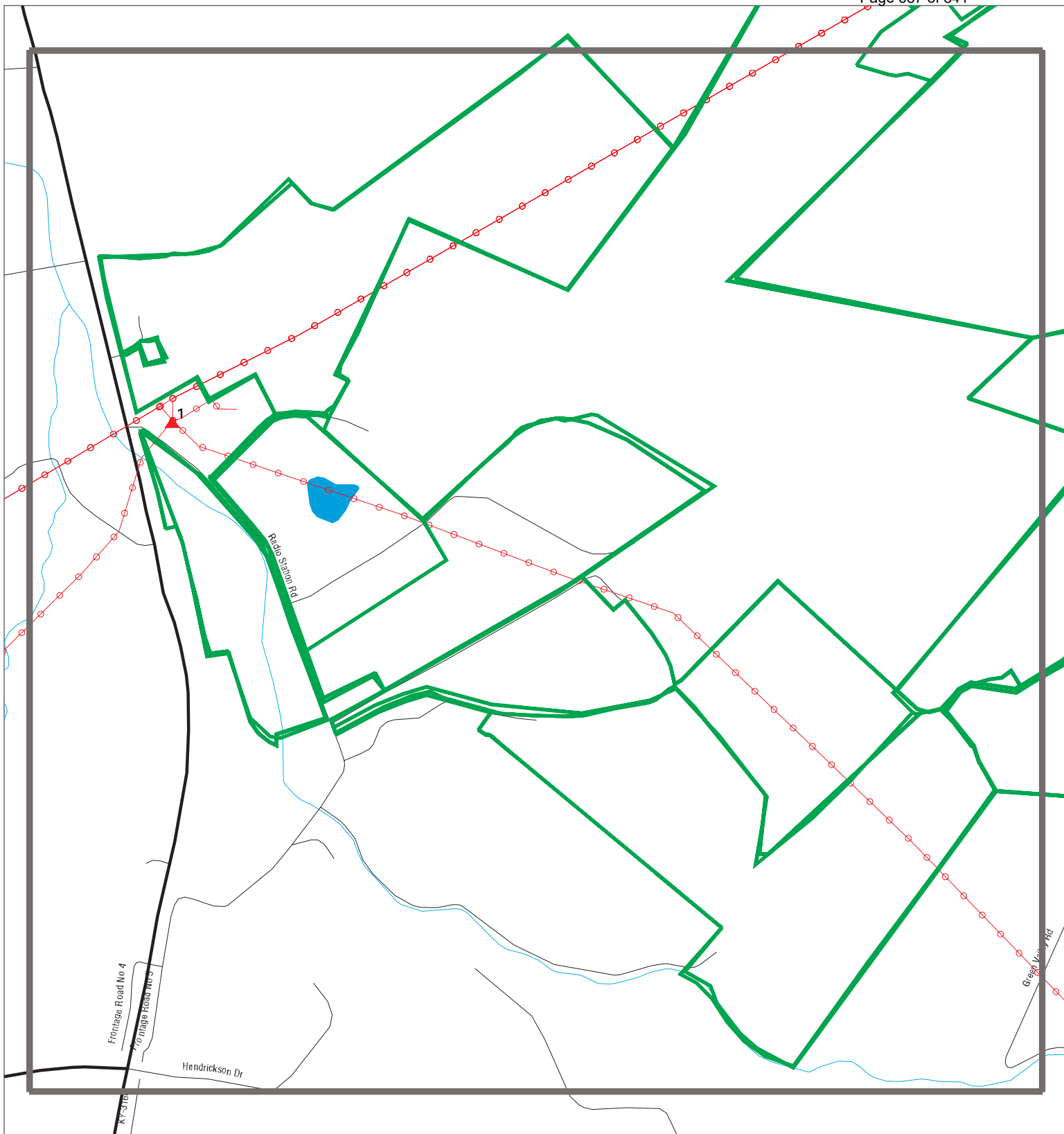
SITE NAME: Northern Bobwhite Phase 1 ADDRESS: Northern Bobwhite Phase 1 CITY/STATE: Springfield KY ZIP: 40069	CLIENT: Stantec CONTACT: Lucas Downs INQUIRY #: 7566597.8s DATE: 02/13/24
--	--

MAPPED SITES SUMMARY - FOCUS MAP 10

Target Property:
NORTHERN BOBWHITE PHASE 1
SPRINGFIELD, KY 40069

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
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NO MAPPED SITES FOUND



- ▲ Sites
- ▬ Target Property
- ▬ Search Buffer
- ▬ Focus Map - No Sites
- ▬ Focus Map - Sites
- ▬ Power Line
- ▬ Pipe Line
- Dept. Defense Sites
- Indian Reservations BIA
- National Priority List Sites



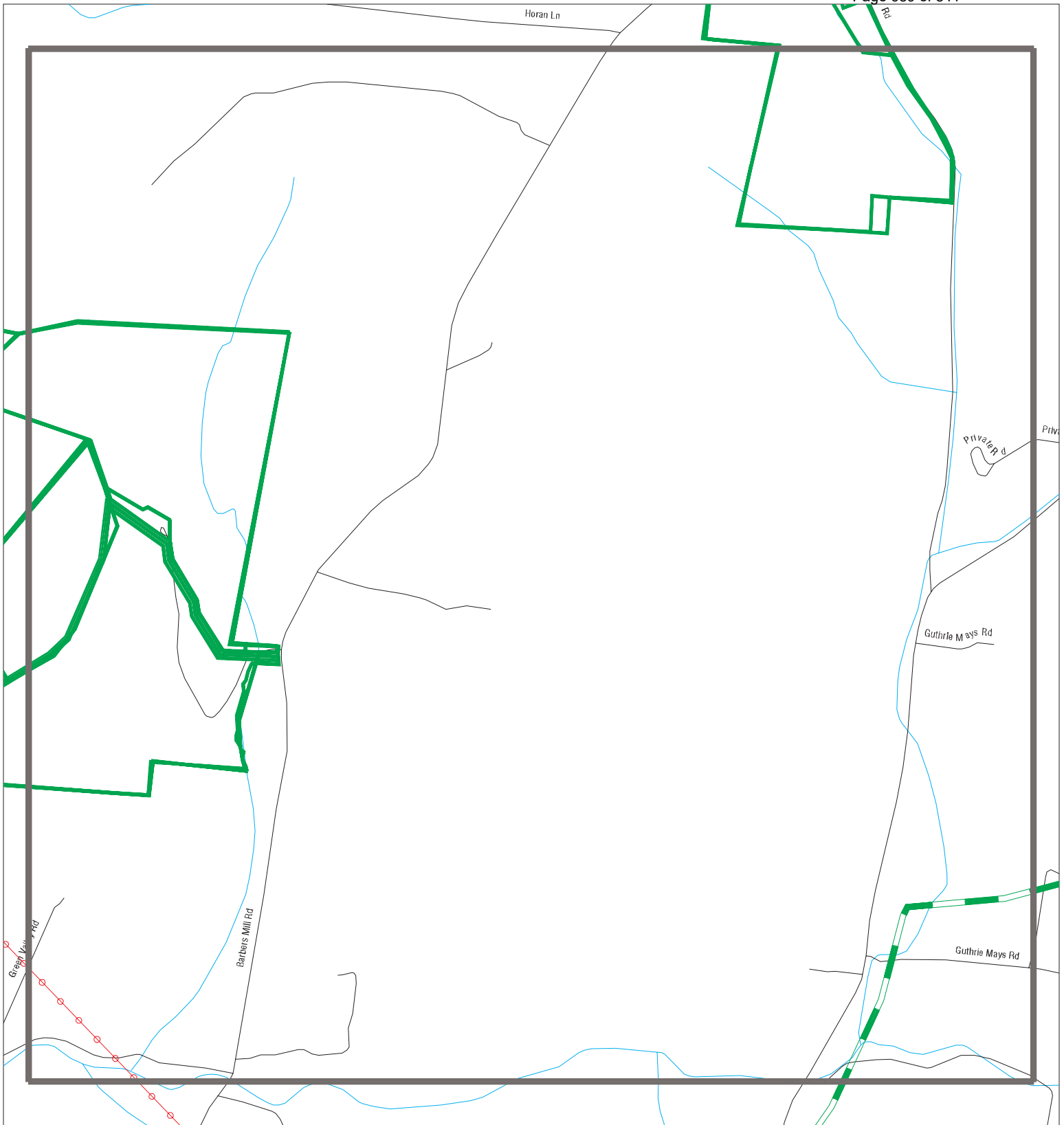
SITE NAME: Northern Bobwhite Phase 1
 ADDRESS: Northern Bobwhite Phase 1
 CITY/STATE: Springfield KY
 ZIP: 40069











CLIENT: Stantec
 CONTACT: Lucas Downs
 INQUIRY #: 7566597.8s
 DATE: 02/13/24

MAPPED SITES SUMMARY - FOCUS MAP 11

Target Property:
NORTHERN BOBWHITE PHASE 1
SPRINGFIELD, KY 40069

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
1 / 11	LG&E KENTUCKY UTILIT	RADIO STATION ROAD	SHWS	181 0.034 NE



- | | | |
|--|--|---|
|  Sites |  Focus Map - Sites |  Dept. Defense Sites |
|  Target Property |  Power Line |  Indian Reservations BIA |
|  Search Buffer |  Pipe Line | |
|  Focus Map - No Sites |  National Priority List Sites | |



SITE NAME: Northern Bobwhite Phase 1
 ADDRESS: Northern Bobwhite Phase 1
 CITY/STATE: Springfield KY
 ZIP: 40069

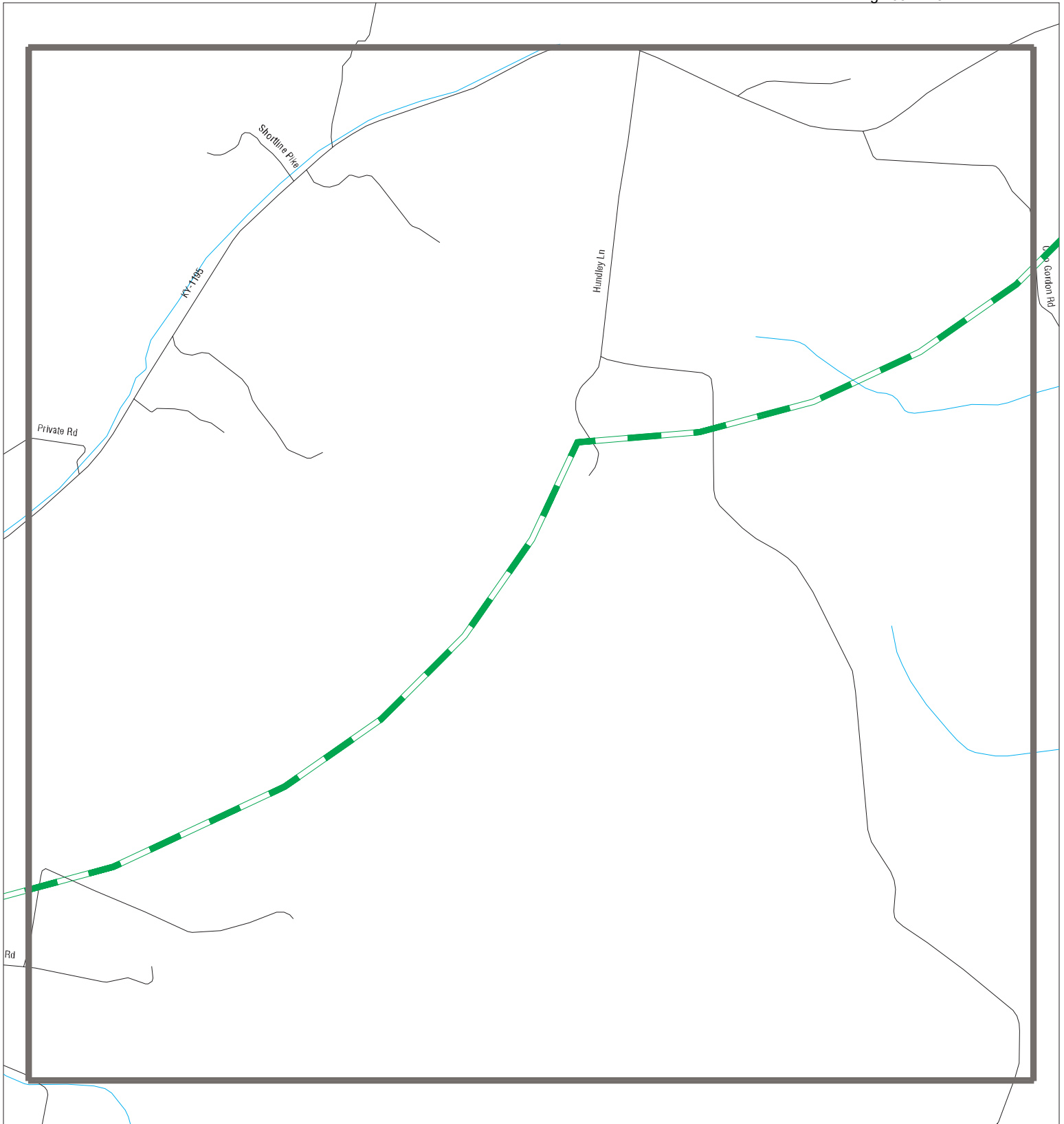
CLIENT: Stantec
 CONTACT: Lucas Downs
 INQUIRY #: 7566597.8s
 DATE: 02/13/24











MAPPED SITES SUMMARY - FOCUS MAP 12

Target Property:
NORTHERN BOBWHITE PHASE 1
SPRINGFIELD, KY 40069

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
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NO MAPPED SITES FOUND



- | | | | | | |
|--|----------------------|---|-------------------|---|------------------------------|
|  | Sites |  | Focus Map - Sites |  | Dept. Defense Sites |
|  | Target Property |  | Power Line |  | Indian Reservations BIA |
|  | Search Buffer |  | Pipe Line |  | National Priority List Sites |
|  | Focus Map - No Sites | | | | |



SITE NAME: Northern Bobwhite Phase 1
 ADDRESS: Northern Bobwhite Phase 1
 CITY/STATE: Springfield KY
 ZIP: 40069

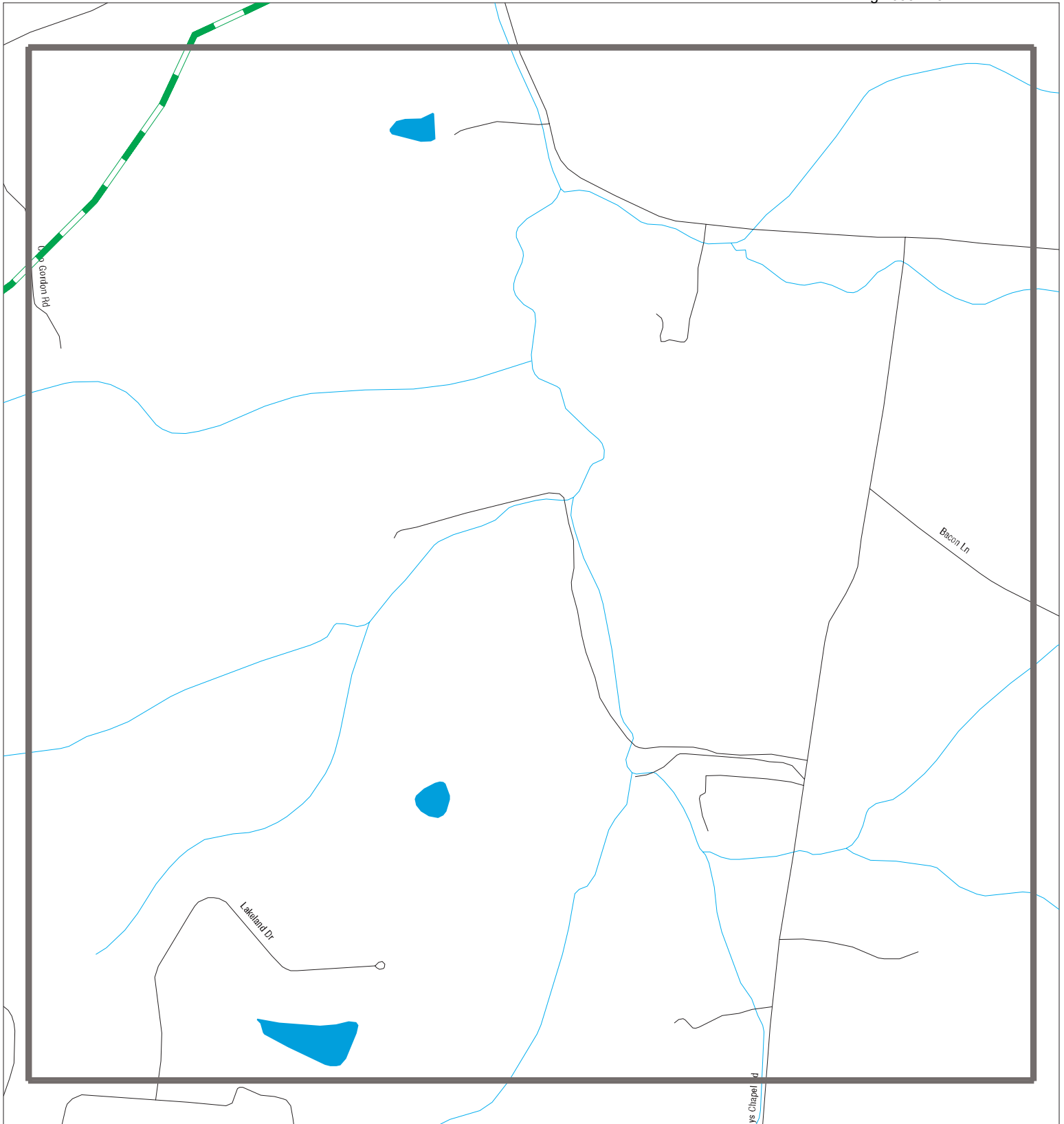
CLIENT: Stantec
 CONTACT: Lucas Downs
 INQUIRY #: 7566597.8s
 DATE: 02/13/24











MAPPED SITES SUMMARY - FOCUS MAP 13

Target Property:
NORTHERN BOBWHITE PHASE 1
SPRINGFIELD, KY 40069

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
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NO MAPPED SITES FOUND



- | | | |
|---|--|---|
|  Sites |  Focus Map - Sites |  Dept. Defense Sites |
|  Target Property |  Power Line |  Indian Reservations BIA |
|  Search Buffer |  Pipe Line | |
|  Focus Map - No Sites |  National Priority List Sites | |



SITE NAME: Northern Bobwhite Phase 1
 ADDRESS: Northern Bobwhite Phase 1
 CITY/STATE: Springfield KY
 ZIP: 40069

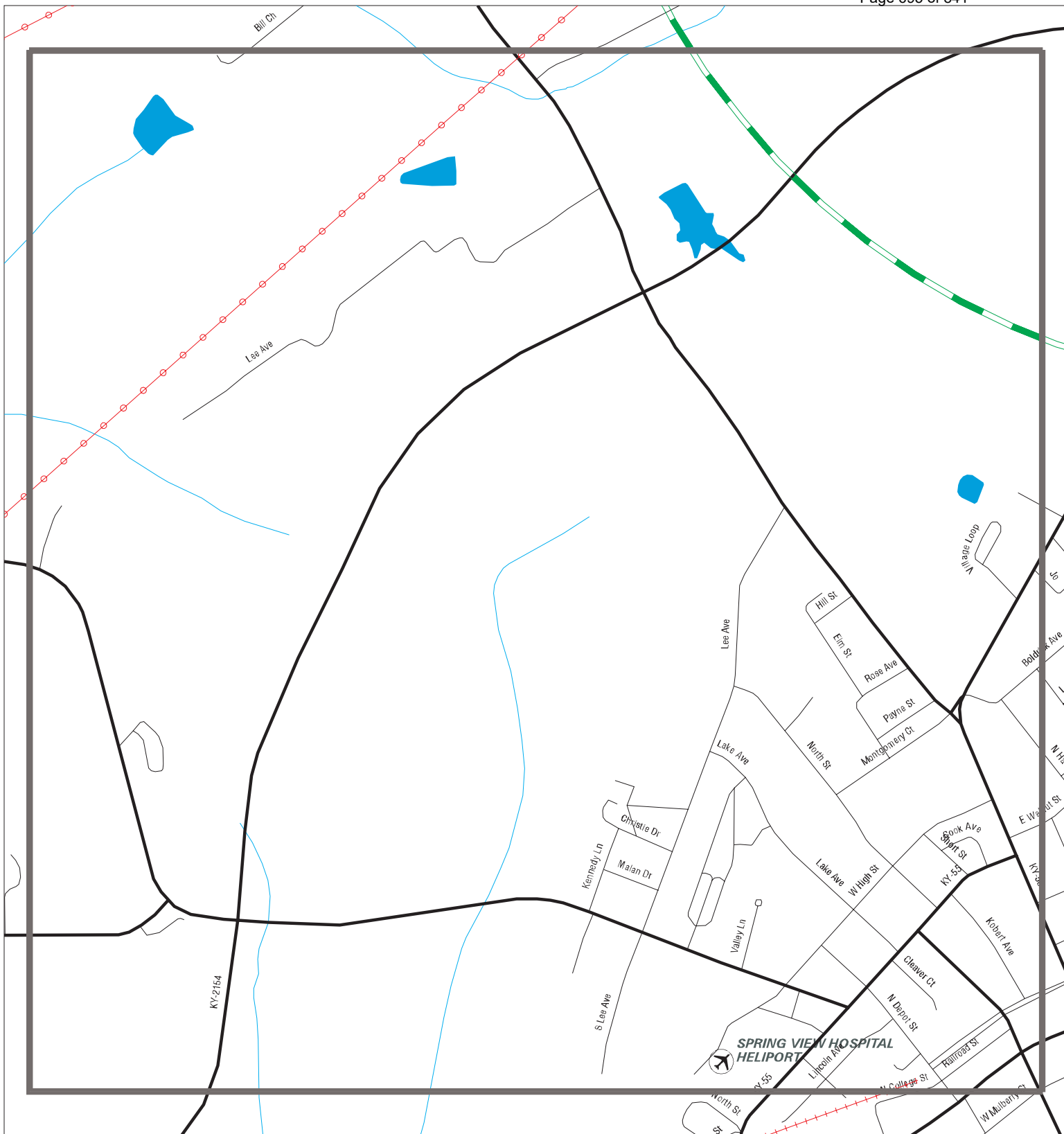
CLIENT: Stantec
 CONTACT: Lucas Downs
 INQUIRY #: 7566597.8s
 DATE: 02/13/24











MAPPED SITES SUMMARY - FOCUS MAP 14

Target Property:
NORTHERN BOBWHITE PHASE 1
SPRINGFIELD, KY 40069

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
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NO MAPPED SITES FOUND



-  Sites
-  Target Property
-  Search Buffer
-  Focus Map - No Sites
-  Focus Map - Sites
-  Power Line
-  Pipe Line
-  National Priority List Sites
-  Dept. Defense Sites
-  Indian Reservations BIA



SITE NAME: Northern Bobwhite Phase 1
 ADDRESS: Northern Bobwhite Phase 1
 CITY/STATE: Springfield KY
 ZIP: 40069

CLIENT: Stantec
 CONTACT: Lucas Downs
 INQUIRY #: 7566597.8s
 DATE: 02/13/24

MAPPED SITES SUMMARY - FOCUS MAP 15

Target Property:
NORTHERN BOBWHITE PHASE 1
SPRINGFIELD, KY 40069

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
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NO MAPPED SITES FOUND



- | | | |
|----------------------|------------------------------|-------------------------|
| Sites | Focus Map - Sites | Dept. Defense Sites |
| Target Property | Power Line | Indian Reservations BIA |
| Search Buffer | Pipe Line | |
| Focus Map - No Sites | National Priority List Sites | |



SITE NAME: Northern Bobwhite Phase 1
 ADDRESS: Northern Bobwhite Phase 1
 CITY/STATE: Springfield KY
 ZIP: 40069

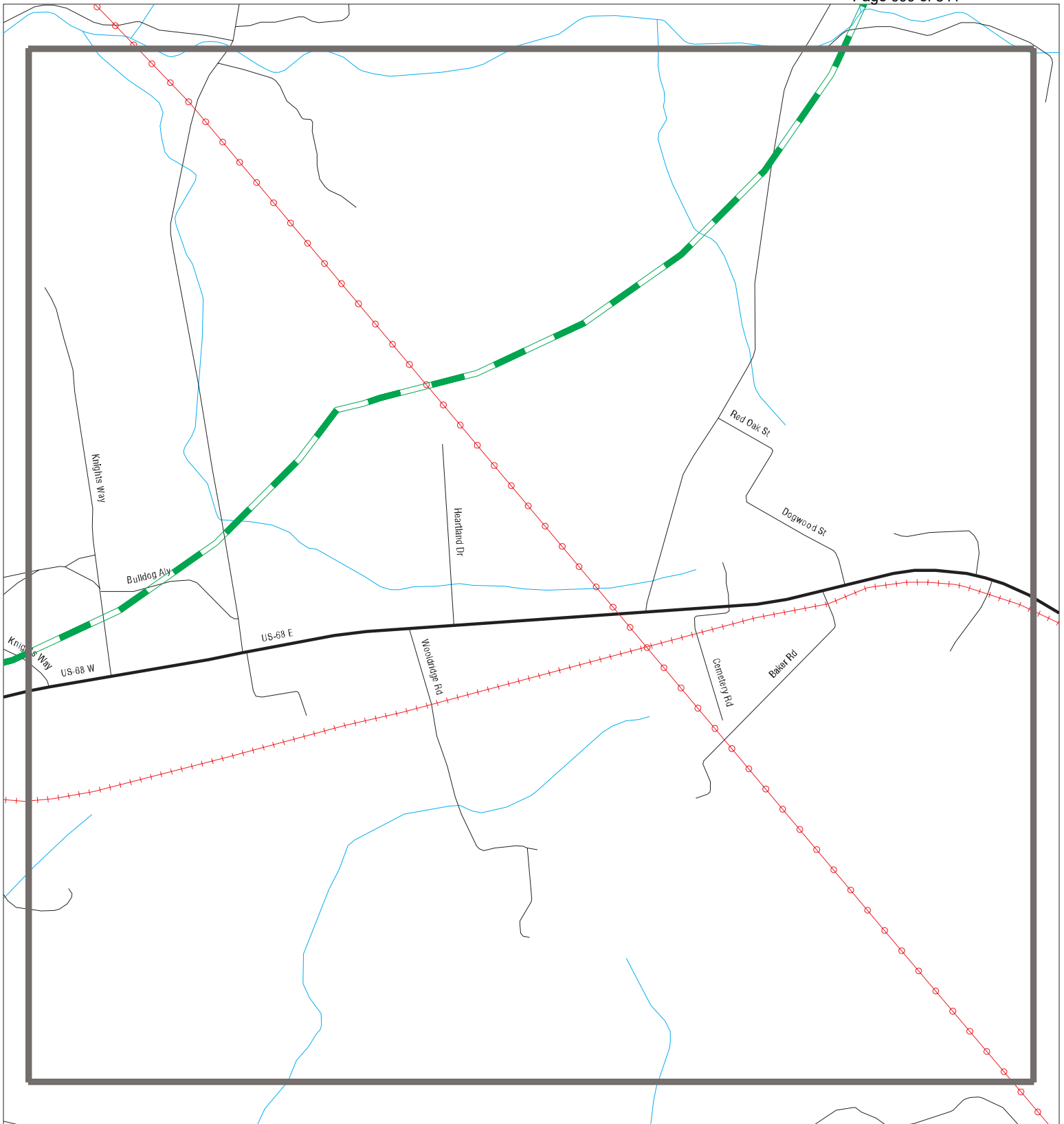
CLIENT: Stantec
 CONTACT: Lucas Downs
 INQUIRY #: 7566597.8s
 DATE: 02/13/24











MAPPED SITES SUMMARY - FOCUS MAP 16

Target Property:
NORTHERN BOBWHITE PHASE 1
SPRINGFIELD, KY 40069

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
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NO MAPPED SITES FOUND



- | | | |
|---|--|---|
|  Sites |  Focus Map - Sites |  Dept. Defense Sites |
|  Target Property |  Power Line |  Indian Reservations BIA |
|  Search Buffer |  Pipe Line | |
|  Focus Map - No Sites |  National Priority List Sites | |



SITE NAME: Northern Bobwhite Phase 1
 ADDRESS: Northern Bobwhite Phase 1
 CITY/STATE: Springfield KY
 ZIP: 40069

CLIENT: Stantec
 CONTACT: Lucas Downs
 INQUIRY #: 7566597.8s
 DATE: 02/13/24

MAPPED SITES SUMMARY - FOCUS MAP 17

Target Property:
NORTHERN BOBWHITE PHASE 1
SPRINGFIELD, KY 40069

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
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NO MAPPED SITES FOUND

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
--	------	-------------	--------------------------------

1 NE < 1/8 0.034 mi. 181 ft.	LG&E KENTUCKY UTILITIES LEBANON SUBSTATION RADIO STATION ROAD LEBANON, KY 40033	SHWS	S122374672 N/A
--	--	-------------	---------------------------------

Actual: 781 ft.	SHWS:	
Focus Map: 11	Name: Address: City,State,Zip: Facility Id: Status: Description: Closure Date: Longitude: Latitude: Subject Item County: Sub Item Longitude: Sub Item Latitude: Subject Item Address: Subject Item Address2: Subject Item City,St,Zip: Regulatory Desc: Closure Option: Side SG: Acreage:	LG&E KENTUCKY UTILITIES LEBANON SUBSTATION RADIO STATION ROAD LEBANON, KY 40033 136520 Closed (Closed Option C Restored 1/15/2020) LG&E Kentucky Utilities Lebanon Substation: Incident #2437776 01/15/2020 -85.249971 37.604860 Marion -85.249971 37.604860 Radio Station Rd Not reported Lebanon, KY 40033 Petroleum Cleanup Option C Restored Transformer Spill 2.00

Count: 0 records

ORPHAN SUMMARY

<u>City</u>	<u>EDR ID</u>	<u>Site Name</u>	<u>Site Address</u>	<u>Zip</u>	<u>Database(s)</u>
NO SITES FOUND					

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 12/26/2023	Source: EPA
Date Data Arrived at EDR: 01/02/2024	Telephone: N/A
Date Made Active in Reports: 01/24/2024	Last EDR Contact: 02/01/2024
Number of Days to Update: 22	Next Scheduled EDR Contact: 04/08/2024
	Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 12/26/2023	Source: EPA
Date Data Arrived at EDR: 01/02/2024	Telephone: N/A
Date Made Active in Reports: 01/24/2024	Last EDR Contact: 02/01/2024
Number of Days to Update: 22	Next Scheduled EDR Contact: 04/08/2024
	Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/15/1991
 Date Data Arrived at EDR: 02/02/1994
 Date Made Active in Reports: 03/30/1994
 Number of Days to Update: 56

Source: EPA
 Telephone: 202-564-4267
 Last EDR Contact: 08/15/2011
 Next Scheduled EDR Contact: 11/28/2011
 Data Release Frequency: No Update Planned

Lists of Federal Delisted NPL sites

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 12/26/2023
 Date Data Arrived at EDR: 01/02/2024
 Date Made Active in Reports: 01/24/2024
 Number of Days to Update: 22

Source: EPA
 Telephone: N/A
 Last EDR Contact: 02/01/2024
 Next Scheduled EDR Contact: 04/08/2024
 Data Release Frequency: Quarterly

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 12/20/2023
 Date Data Arrived at EDR: 12/20/2023
 Date Made Active in Reports: 01/24/2024
 Number of Days to Update: 35

Source: Environmental Protection Agency
 Telephone: 703-603-8704
 Last EDR Contact: 12/20/2023
 Next Scheduled EDR Contact: 04/08/2024
 Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly known as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 09/19/2023
 Date Data Arrived at EDR: 10/03/2023
 Date Made Active in Reports: 10/19/2023
 Number of Days to Update: 16

Source: EPA
 Telephone: 800-424-9346
 Last EDR Contact: 02/01/2024
 Next Scheduled EDR Contact: 04/22/2024
 Data Release Frequency: Quarterly

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 09/19/2023	Source: EPA
Date Data Arrived at EDR: 10/03/2023	Telephone: 800-424-9346
Date Made Active in Reports: 10/19/2023	Last EDR Contact: 02/01/2024
Number of Days to Update: 16	Next Scheduled EDR Contact: 04/22/2024
	Data Release Frequency: Quarterly

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/04/2023	Source: EPA
Date Data Arrived at EDR: 12/06/2023	Telephone: 800-424-9346
Date Made Active in Reports: 12/12/2023	Last EDR Contact: 12/06/2023
Number of Days to Update: 6	Next Scheduled EDR Contact: 04/01/2024
	Data Release Frequency: Quarterly

Lists of Federal RCRA TSD facilities

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 12/04/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/06/2023	Telephone: (404) 562-8651
Date Made Active in Reports: 12/12/2023	Last EDR Contact: 12/06/2023
Number of Days to Update: 6	Next Scheduled EDR Contact: 04/01/2024
	Data Release Frequency: Quarterly

Lists of Federal RCRA generators

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/04/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/06/2023	Telephone: (404) 562-8651
Date Made Active in Reports: 12/12/2023	Last EDR Contact: 12/06/2023
Number of Days to Update: 6	Next Scheduled EDR Contact: 04/01/2024
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/04/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/06/2023	Telephone: (404) 562-8651
Date Made Active in Reports: 12/12/2023	Last EDR Contact: 12/06/2023
Number of Days to Update: 6	Next Scheduled EDR Contact: 04/01/2024
	Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/04/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/06/2023	Telephone: (404) 562-8651
Date Made Active in Reports: 12/12/2023	Last EDR Contact: 12/06/2023
Number of Days to Update: 6	Next Scheduled EDR Contact: 04/01/2024
	Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 08/03/2023	Source: Department of the Navy
Date Data Arrived at EDR: 08/07/2023	Telephone: 843-820-7326
Date Made Active in Reports: 10/10/2023	Last EDR Contact: 02/02/2024
Number of Days to Update: 64	Next Scheduled EDR Contact: 05/20/2024
	Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 08/21/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/21/2023	Telephone: 703-603-0695
Date Made Active in Reports: 11/07/2023	Last EDR Contact: 11/17/2023
Number of Days to Update: 78	Next Scheduled EDR Contact: 03/04/2024
	Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 08/21/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/21/2023	Telephone: 703-603-0695
Date Made Active in Reports: 11/07/2023	Last EDR Contact: 11/17/2023
Number of Days to Update: 78	Next Scheduled EDR Contact: 03/04/2024
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING***Federal ERNS list*****ERNS: Emergency Response Notification System**

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/18/2023

Source: National Response Center, United States Coast Guard

Date Data Arrived at EDR: 09/20/2023

Telephone: 202-267-2180

Date Made Active in Reports: 12/11/2023

Last EDR Contact: 12/13/2023

Number of Days to Update: 82

Next Scheduled EDR Contact: 04/01/2024

Data Release Frequency: Quarterly

Lists of state- and tribal hazardous waste facilities**SHWS: State Leads List**

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 11/27/2023

Source: Department of Environmental Protection

Date Data Arrived at EDR: 11/29/2023

Telephone: 502-564-6716

Date Made Active in Reports: 12/05/2023

Last EDR Contact: 11/15/2023

Number of Days to Update: 6

Next Scheduled EDR Contact: 03/04/2024

Data Release Frequency: Quarterly

Lists of state and tribal landfills and solid waste disposal facilities**SWF/LF: Solid Waste Facilities List**

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 08/22/2023

Source: Department of Environmental Protection

Date Data Arrived at EDR: 08/24/2023

Telephone: 502-564-6716

Date Made Active in Reports: 11/03/2023

Last EDR Contact: 01/23/2024

Number of Days to Update: 71

Next Scheduled EDR Contact: 05/06/2024

Data Release Frequency: Semi-Annually

Lists of state and tribal leaking storage tanks**PSTEAF: Facility Ranking List**

The Underground Storage Tank Branch (USTB) has ranked all PSTEAF reimbursable facilities requiring corrective action, in accordance with 401 KAR 42:290. Directive letters will be issued on the basis of facility ranking and available PSTEAF funding in sequential order as ranked. For example, Rank 2 facilities will be issued directives before Rank 3 facilities.

Date of Government Version: 09/01/2023

Source: Department of Environmental Protection

Date Data Arrived at EDR: 10/04/2023

Telephone: 502-564-5981

Date Made Active in Reports: 12/21/2023

Last EDR Contact: 01/04/2024

Number of Days to Update: 78

Next Scheduled EDR Contact: 04/15/2024

Data Release Frequency: Quarterly

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 04/20/2023

Source: EPA Region 4

Date Data Arrived at EDR: 05/09/2023

Telephone: 404-562-8677

Date Made Active in Reports: 07/14/2023

Last EDR Contact: 01/17/2024

Number of Days to Update: 66

Next Scheduled EDR Contact: 04/29/2024

Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/20/2023	Source: EPA Region 10
Date Data Arrived at EDR: 05/09/2023	Telephone: 206-553-2857
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/17/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/20/2023	Source: EPA Region 1
Date Data Arrived at EDR: 05/09/2023	Telephone: 617-918-1313
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/17/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/14/2023	Source: EPA, Region 5
Date Data Arrived at EDR: 05/09/2023	Telephone: 312-886-7439
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/17/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/26/2023	Source: EPA Region 6
Date Data Arrived at EDR: 05/09/2023	Telephone: 214-665-6597
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/17/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/19/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 05/09/2023	Telephone: 415-972-3372
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/17/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/25/2023	Source: EPA Region 7
Date Data Arrived at EDR: 05/09/2023	Telephone: 913-551-7003
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/17/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 04/19/2023	Source: EPA Region 8
Date Data Arrived at EDR: 05/09/2023	Telephone: 303-312-6271
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/17/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SB193: SB193 Branch Site Inventory List

The inventory indicates facilities that have performed permanent closure activities at a regulated underground storage tank facility and have known soil and/or groundwater contamination.

Date of Government Version: 09/05/2006	Source: Department of Environmental Protection
Date Data Arrived at EDR: 09/13/2006	Telephone: 502-564-5981
Date Made Active in Reports: 10/18/2006	Last EDR Contact: 04/08/2016
Number of Days to Update: 35	Next Scheduled EDR Contact: 07/25/2016
	Data Release Frequency: No Update Planned

Lists of state and tribal registered storage tanks

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 03/08/2023	Source: FEMA
Date Data Arrived at EDR: 03/09/2023	Telephone: 202-646-5797
Date Made Active in Reports: 05/30/2023	Last EDR Contact: 01/11/2024
Number of Days to Update: 82	Next Scheduled EDR Contact: 04/15/2024
	Data Release Frequency: Varies

UST: Underground Storage Tank Database

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 10/30/2023	Source: Department of Environmental Protection
Date Data Arrived at EDR: 11/17/2023	Telephone: 502-564-5981
Date Made Active in Reports: 02/05/2024	Last EDR Contact: 11/17/2023
Number of Days to Update: 80	Next Scheduled EDR Contact: 03/04/2024
	Data Release Frequency: Quarterly

AST: Above Ground Storage Tanks

A listing of aboveground storage tank site locations.

Date of Government Version: 11/06/2023	Source: Office of State Fire Marshal
Date Data Arrived at EDR: 11/09/2023	Telephone: 502-564-4010
Date Made Active in Reports: 11/20/2023	Last EDR Contact: 11/01/2023
Number of Days to Update: 11	Next Scheduled EDR Contact: 03/04/2024
	Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 04/20/2023	Source: EPA Region 4
Date Data Arrived at EDR: 05/09/2023	Telephone: 404-562-9424
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/17/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 04/20/2023	Source: EPA Region 8
Date Data Arrived at EDR: 05/09/2023	Telephone: 303-312-6137
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/17/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING**INDIAN UST R7: Underground Storage Tanks on Indian Land**

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/25/2023	Source: EPA Region 7
Date Data Arrived at EDR: 05/09/2023	Telephone: 913-551-7003
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/17/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/20/2023	Source: EPA, Region 1
Date Data Arrived at EDR: 05/09/2023	Telephone: 617-918-1313
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/17/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/14/2023	Source: EPA Region 5
Date Data Arrived at EDR: 05/09/2023	Telephone: 312-886-6136
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/17/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/26/2023	Source: EPA Region 6
Date Data Arrived at EDR: 05/09/2023	Telephone: 214-665-7591
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/17/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/20/2023	Source: EPA Region 10
Date Data Arrived at EDR: 05/09/2023	Telephone: 206-553-2857
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/17/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/19/2023	Source: EPA Region 9
Date Data Arrived at EDR: 05/09/2023	Telephone: 415-972-3368
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/17/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

State and tribal institutional control / engineering control registries

ENG CONTROLS: Engineering Controls Site Listing

A listing of sites that use engineering controls.

Date of Government Version: 11/28/2023	Source: Department of Environmental Protection
Date Data Arrived at EDR: 11/29/2023	Telephone: 502-564-6716
Date Made Active in Reports: 12/05/2023	Last EDR Contact: 11/15/2023
Number of Days to Update: 6	Next Scheduled EDR Contact: 03/04/2024
	Data Release Frequency: Varies

INST CONTROL: State Superfund Database

A list of closed sites in the State Superfund Database. Institutional controls would be in place at any site that uses Contained or Managed as a Closure Option.

Date of Government Version: 11/28/2023	Source: Department of Environmental Protection
Date Data Arrived at EDR: 11/29/2023	Telephone: 502-564-6716
Date Made Active in Reports: 12/05/2023	Last EDR Contact: 11/15/2023
Number of Days to Update: 6	Next Scheduled EDR Contact: 03/04/2024
	Data Release Frequency: Varies

Lists of state and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015	Source: EPA, Region 1
Date Data Arrived at EDR: 09/29/2015	Telephone: 617-918-1102
Date Made Active in Reports: 02/18/2016	Last EDR Contact: 12/12/2023
Number of Days to Update: 142	Next Scheduled EDR Contact: 04/01/2024
	Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Sites

Sites that have been accepted into the Voluntary Cleanup Program or have submitted an application.

Date of Government Version: 01/09/2024	Source: Department of Environmental Protection
Date Data Arrived at EDR: 01/11/2024	Telephone: 502-564-6716
Date Made Active in Reports: 01/12/2024	Last EDR Contact: 12/19/2023
Number of Days to Update: 1	Next Scheduled EDR Contact: 04/08/2024
	Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008	Source: EPA, Region 7
Date Data Arrived at EDR: 04/22/2008	Telephone: 913-551-7365
Date Made Active in Reports: 05/19/2008	Last EDR Contact: 07/08/2021
Number of Days to Update: 27	Next Scheduled EDR Contact: 07/20/2009
	Data Release Frequency: Varies

Lists of state and tribal brownfield sites

BROWNFIELDS: Kentucky Brownfield Inventory

The Kentucky Brownfield Program has created an inventory of brownfield sites in order to market the properties to those interested in brownfield redevelopment. The Kentucky Brownfield Program is working to promote the redevelopment of these sites by helping to remove barriers that prevent reuse, providing useful information to communities, developers and the public and encouraging a climate that fosters redevelopment of contaminated sites.

Date of Government Version: 10/20/2023	Source: Division of Compliance Assistance
Date Data Arrived at EDR: 10/25/2023	Telephone: 502-564-0323
Date Made Active in Reports: 01/16/2024	Last EDR Contact: 01/09/2024
Number of Days to Update: 83	Next Scheduled EDR Contact: 04/22/2024
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 08/15/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/30/2023	Telephone: 202-566-2777
Date Made Active in Reports: 12/01/2023	Last EDR Contact: 12/14/2023
Number of Days to Update: 93	Next Scheduled EDR Contact: 03/25/2024
	Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

HIST LF: Historical Landfills

This solid waste facility listing contains detail information that is not included in the landfill listing. A listing with detail information is no longer available by the Department of Environmental Protection.

Date of Government Version: 05/01/2003	Source: Department of Environmental Protection
Date Data Arrived at EDR: 03/30/2006	Telephone: 502-564-6716
Date Made Active in Reports: 05/01/2006	Last EDR Contact: 02/23/2009
Number of Days to Update: 32	Next Scheduled EDR Contact: 05/25/2009
	Data Release Frequency: No Update Planned

SWRCY: Recycling Facilities

A listing of recycling facilities located in the state of Kentucky.

Date of Government Version: 09/11/2023	Source: Department of Environmental Protection
Date Data Arrived at EDR: 10/10/2023	Telephone: 502-564-6716
Date Made Active in Reports: 01/03/2024	Last EDR Contact: 01/11/2024
Number of Days to Update: 85	Next Scheduled EDR Contact: 04/22/2024
	Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/03/2007	Telephone: 703-308-8245
Date Made Active in Reports: 01/24/2008	Last EDR Contact: 01/26/2024
Number of Days to Update: 52	Next Scheduled EDR Contact: 05/06/2024
	Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009	Source: EPA, Region 9
Date Data Arrived at EDR: 05/07/2009	Telephone: 415-947-4219
Date Made Active in Reports: 09/21/2009	Last EDR Contact: 01/11/2024
Number of Days to Update: 137	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Services, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 11/17/2023
Date Data Arrived at EDR: 11/17/2023
Date Made Active in Reports: 02/07/2024
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/17/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: No Update Planned

CDL: Clandestine Drug Lab Location Listing

Clandestine drug lab site locations.

Date of Government Version: 11/21/2023
Date Data Arrived at EDR: 11/29/2023
Date Made Active in Reports: 12/05/2023
Number of Days to Update: 6

Source: Department of Environmental Protection
Telephone: 502-564-6716
Last EDR Contact: 11/15/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Varies

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 11/17/2023
Date Data Arrived at EDR: 11/17/2023
Date Made Active in Reports: 02/07/2024
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/17/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Quarterly

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 11/14/2023
 Date Data Arrived at EDR: 12/22/2023
 Date Made Active in Reports: 01/24/2024
 Number of Days to Update: 33

Source: Environmental Protection Agency
 Telephone: 202-564-6023
 Last EDR Contact: 02/01/2024
 Next Scheduled EDR Contact: 04/08/2024
 Data Release Frequency: Semi-Annually

Records of Emergency Release Reports**HMIRS: Hazardous Materials Information Reporting System**

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 09/18/2023
 Date Data Arrived at EDR: 09/20/2023
 Date Made Active in Reports: 11/14/2023
 Number of Days to Update: 55

Source: U.S. Department of Transportation
 Telephone: 202-366-4555
 Last EDR Contact: 12/13/2023
 Next Scheduled EDR Contact: 04/01/2024
 Data Release Frequency: Quarterly

SPILLS: State spills

A listing of spill and/or release related incidents.

Date of Government Version: 10/17/2023
 Date Data Arrived at EDR: 10/18/2023
 Date Made Active in Reports: 01/12/2024
 Number of Days to Update: 86

Source: DEP, Emergency Response
 Telephone: 502-564-2380
 Last EDR Contact: 01/09/2024
 Next Scheduled EDR Contact: 04/22/2024
 Data Release Frequency: Varies

Other Ascertainable Records**RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated**

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/04/2023
 Date Data Arrived at EDR: 12/06/2023
 Date Made Active in Reports: 12/12/2023
 Number of Days to Update: 6

Source: Environmental Protection Agency
 Telephone: (404) 562-8651
 Last EDR Contact: 12/06/2023
 Next Scheduled EDR Contact: 04/01/2024
 Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 09/28/2023
 Date Data Arrived at EDR: 11/10/2023
 Date Made Active in Reports: 02/07/2024
 Number of Days to Update: 89

Source: U.S. Army Corps of Engineers
 Telephone: 202-528-4285
 Last EDR Contact: 11/10/2023
 Next Scheduled EDR Contact: 02/26/2024
 Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 06/07/2021
 Date Data Arrived at EDR: 07/13/2021
 Date Made Active in Reports: 03/09/2022
 Number of Days to Update: 239

Source: USGS
 Telephone: 888-275-8747
 Last EDR Contact: 01/10/2024
 Next Scheduled EDR Contact: 04/22/2024
 Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018	Source: U.S. Geological Survey
Date Data Arrived at EDR: 04/11/2018	Telephone: 888-275-8747
Date Made Active in Reports: 11/06/2019	Last EDR Contact: 01/05/2024
Number of Days to Update: 574	Next Scheduled EDR Contact: 04/15/2024
	Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 07/30/2021	Source: Environmental Protection Agency
Date Data Arrived at EDR: 02/03/2023	Telephone: 615-532-8599
Date Made Active in Reports: 02/10/2023	Last EDR Contact: 02/06/2024
Number of Days to Update: 7	Next Scheduled EDR Contact: 05/20/2024
	Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 09/18/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 09/20/2023	Telephone: 202-566-1917
Date Made Active in Reports: 12/12/2023	Last EDR Contact: 12/13/2023
Number of Days to Update: 83	Next Scheduled EDR Contact: 04/01/2024
	Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/21/2014	Telephone: 617-520-3000
Date Made Active in Reports: 06/17/2014	Last EDR Contact: 01/29/2024
Number of Days to Update: 88	Next Scheduled EDR Contact: 05/13/2024
	Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 05/08/2018	Telephone: 703-308-4044
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 02/02/2024
Number of Days to Update: 73	Next Scheduled EDR Contact: 05/13/2024
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING**TSCA: Toxic Substances Control Act**

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2020	Source: EPA
Date Data Arrived at EDR: 06/14/2022	Telephone: 202-260-5521
Date Made Active in Reports: 03/24/2023	Last EDR Contact: 12/14/2023
Number of Days to Update: 283	Next Scheduled EDR Contact: 03/25/2024
	Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2022	Source: EPA
Date Data Arrived at EDR: 11/13/2023	Telephone: 202-566-0250
Date Made Active in Reports: 02/07/2024	Last EDR Contact: 11/13/2023
Number of Days to Update: 86	Next Scheduled EDR Contact: 02/26/2024
	Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 10/19/2023	Source: EPA
Date Data Arrived at EDR: 10/20/2023	Telephone: 202-564-4203
Date Made Active in Reports: 01/16/2024	Last EDR Contact: 01/17/2024
Number of Days to Update: 88	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 12/26/2023	Source: EPA
Date Data Arrived at EDR: 01/02/2024	Telephone: 703-416-0223
Date Made Active in Reports: 01/24/2024	Last EDR Contact: 02/01/2024
Number of Days to Update: 22	Next Scheduled EDR Contact: 03/11/2024
	Data Release Frequency: Annually

RMP: Risk Management Plans

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 09/01/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 09/27/2023	Telephone: 202-564-8600
Date Made Active in Reports: 12/21/2023	Last EDR Contact: 01/12/2024
Number of Days to Update: 85	Next Scheduled EDR Contact: 04/19/2024
	Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995	Source: EPA
Date Data Arrived at EDR: 07/03/1995	Telephone: 202-564-4104
Date Made Active in Reports: 08/07/1995	Last EDR Contact: 06/02/2008
Number of Days to Update: 35	Next Scheduled EDR Contact: 09/01/2008
	Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 09/19/2023	Source: EPA
Date Data Arrived at EDR: 10/03/2023	Telephone: 202-564-6023
Date Made Active in Reports: 10/19/2023	Last EDR Contact: 02/01/2024
Number of Days to Update: 16	Next Scheduled EDR Contact: 05/13/2024
	Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 03/20/2023	Source: EPA
Date Data Arrived at EDR: 04/04/2023	Telephone: 202-566-0500
Date Made Active in Reports: 06/09/2023	Last EDR Contact: 01/05/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/15/2024
	Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/23/2016	Telephone: 202-564-2501
Date Made Active in Reports: 02/10/2017	Last EDR Contact: 12/26/2023
Number of Days to Update: 79	Next Scheduled EDR Contact: 04/15/2024
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING**FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)**

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009	Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 08/18/2017
Number of Days to Update: 25	Next Scheduled EDR Contact: 12/04/2017
	Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009	Source: EPA
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 08/18/2017
Number of Days to Update: 25	Next Scheduled EDR Contact: 12/04/2017
	Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 07/20/2023	Source: Nuclear Regulatory Commission
Date Data Arrived at EDR: 09/01/2023	Telephone: 301-415-0717
Date Made Active in Reports: 09/20/2023	Last EDR Contact: 01/11/2024
Number of Days to Update: 19	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2021	Source: Department of Energy
Date Data Arrived at EDR: 04/14/2023	Telephone: 202-586-8719
Date Made Active in Reports: 07/10/2023	Last EDR Contact: 11/27/2023
Number of Days to Update: 87	Next Scheduled EDR Contact: 03/11/2024
	Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/05/2019	Telephone: N/A
Date Made Active in Reports: 11/11/2019	Last EDR Contact: 11/27/2023
Number of Days to Update: 251	Next Scheduled EDR Contact: 03/11/2024
	Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/06/2019	Telephone: 202-566-0517
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 02/02/2024
Number of Days to Update: 96	Next Scheduled EDR Contact: 05/13/2024
	Data Release Frequency: Varies

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 07/01/2019
 Date Data Arrived at EDR: 07/01/2019
 Date Made Active in Reports: 09/23/2019
 Number of Days to Update: 84

Source: Environmental Protection Agency
 Telephone: 202-343-9775
 Last EDR Contact: 12/19/2023
 Next Scheduled EDR Contact: 04/08/2024
 Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
 Date Data Arrived at EDR: 03/01/2007
 Date Made Active in Reports: 04/10/2007
 Number of Days to Update: 40

Source: Environmental Protection Agency
 Telephone: 202-564-2501
 Last EDR Contact: 12/17/2007
 Next Scheduled EDR Contact: 03/17/2008
 Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
 Date Data Arrived at EDR: 03/01/2007
 Date Made Active in Reports: 04/10/2007
 Number of Days to Update: 40

Source: Environmental Protection Agency
 Telephone: 202-564-2501
 Last EDR Contact: 12/17/2008
 Next Scheduled EDR Contact: 03/17/2008
 Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transportation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
 Date Data Arrived at EDR: 01/28/2020
 Date Made Active in Reports: 04/17/2020
 Number of Days to Update: 80

Source: Department of Transportation, Office of Pipeline Safety
 Telephone: 202-366-4595
 Last EDR Contact: 01/05/2024
 Next Scheduled EDR Contact: 05/06/2024
 Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2023
 Date Data Arrived at EDR: 01/11/2024
 Date Made Active in Reports: 01/16/2024
 Number of Days to Update: 5

Source: Department of Justice, Consent Decree Library
 Telephone: Varies
 Last EDR Contact: 01/03/2024
 Next Scheduled EDR Contact: 04/15/2024
 Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2021
 Date Data Arrived at EDR: 03/09/2023
 Date Made Active in Reports: 03/20/2023
 Number of Days to Update: 11

Source: EPA/NTIS
 Telephone: 800-424-9346
 Last EDR Contact: 12/06/2023
 Next Scheduled EDR Contact: 04/01/2024
 Data Release Frequency: Biennially

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING**INDIAN RESERV: Indian Reservations**

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014	Source: USGS
Date Data Arrived at EDR: 07/14/2015	Telephone: 202-208-3710
Date Made Active in Reports: 01/10/2017	Last EDR Contact: 01/02/2024
Number of Days to Update: 546	Next Scheduled EDR Contact: 04/15/2024
	Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 03/03/2023	Source: Department of Energy
Date Data Arrived at EDR: 03/03/2023	Telephone: 202-586-3559
Date Made Active in Reports: 06/09/2023	Last EDR Contact: 01/29/2024
Number of Days to Update: 98	Next Scheduled EDR Contact: 05/13/2024
	Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019	Source: Department of Energy
Date Data Arrived at EDR: 11/15/2019	Telephone: 505-845-0011
Date Made Active in Reports: 01/28/2020	Last EDR Contact: 11/09/2023
Number of Days to Update: 74	Next Scheduled EDR Contact: 02/26/2024
	Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 12/26/2024	Source: Environmental Protection Agency
Date Data Arrived at EDR: 01/02/2024	Telephone: 703-603-8787
Date Made Active in Reports: 01/24/2024	Last EDR Contact: 02/01/2024
Number of Days to Update: 22	Next Scheduled EDR Contact: 04/08/2024
	Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931 and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001	Source: American Journal of Public Health
Date Data Arrived at EDR: 10/27/2010	Telephone: 703-305-6451
Date Made Active in Reports: 12/02/2010	Last EDR Contact: 12/02/2009
Number of Days to Update: 36	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/12/2016
 Date Data Arrived at EDR: 10/26/2016
 Date Made Active in Reports: 02/03/2017
 Number of Days to Update: 100

Source: EPA
 Telephone: 202-564-2496
 Last EDR Contact: 09/26/2017
 Next Scheduled EDR Contact: 01/08/2018
 Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
 Date Data Arrived at EDR: 10/26/2016
 Date Made Active in Reports: 02/03/2017
 Number of Days to Update: 100

Source: EPA
 Telephone: 202-564-2496
 Last EDR Contact: 09/26/2017
 Next Scheduled EDR Contact: 01/08/2018
 Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/01/2023
 Date Data Arrived at EDR: 08/22/2023
 Date Made Active in Reports: 11/07/2023
 Number of Days to Update: 77

Source: Department of Labor, Mine Safety and Health Administration
 Telephone: 303-231-5959
 Last EDR Contact: 11/17/2023
 Next Scheduled EDR Contact: 03/04/2024
 Data Release Frequency: Semi-Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 01/02/2024
 Date Data Arrived at EDR: 01/03/2024
 Date Made Active in Reports: 01/04/2024
 Number of Days to Update: 1

Source: DOL, Mine Safety & Health Admi
 Telephone: 202-693-9424
 Last EDR Contact: 01/03/2024
 Next Scheduled EDR Contact: 05/20/2024
 Data Release Frequency: Quarterly

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 01/07/2022
 Date Data Arrived at EDR: 02/24/2023
 Date Made Active in Reports: 05/17/2023
 Number of Days to Update: 82

Source: USGS
 Telephone: 703-648-7709
 Last EDR Contact: 11/20/2023
 Next Scheduled EDR Contact: 03/04/2024
 Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
 Date Data Arrived at EDR: 06/08/2011
 Date Made Active in Reports: 09/13/2011
 Number of Days to Update: 97

Source: USGS
 Telephone: 703-648-7709
 Last EDR Contact: 11/20/2023
 Next Scheduled EDR Contact: 03/04/2024
 Data Release Frequency: Varies

MINES MRDS: Mineral Resources Data System

Mineral Resources Data System

Date of Government Version: 08/23/2022
 Date Data Arrived at EDR: 11/22/2022
 Date Made Active in Reports: 02/28/2023
 Number of Days to Update: 98

Source: USGS
 Telephone: 703-648-6533
 Last EDR Contact: 11/20/2023
 Next Scheduled EDR Contact: 03/04/2024
 Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING**ABANDONED MINES: Abandoned Mines**

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 11/28/2023	Source: Department of Interior
Date Data Arrived at EDR: 11/29/2023	Telephone: 202-208-2609
Date Made Active in Reports: 12/11/2023	Last EDR Contact: 11/28/2023
Number of Days to Update: 12	Next Scheduled EDR Contact: 03/18/2024
	Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 11/03/2023	Source: EPA
Date Data Arrived at EDR: 11/08/2023	Telephone: (404) 562-9900
Date Made Active in Reports: 11/20/2023	Last EDR Contact: 11/08/2023
Number of Days to Update: 12	Next Scheduled EDR Contact: 03/11/2024
	Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021	Source: Environmental Protection Agency
Date Data Arrived at EDR: 05/21/2021	Telephone: 202-564-0527
Date Made Active in Reports: 08/11/2021	Last EDR Contact: 11/15/2023
Number of Days to Update: 82	Next Scheduled EDR Contact: 03/04/2024
	Data Release Frequency: Varies

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 09/06/2023	Source: Department of Defense
Date Data Arrived at EDR: 09/13/2023	Telephone: 703-704-1564
Date Made Active in Reports: 12/11/2023	Last EDR Contact: 01/05/2024
Number of Days to Update: 89	Next Scheduled EDR Contact: 04/22/2024
	Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 09/23/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 10/03/2023	Telephone: 202-564-2280
Date Made Active in Reports: 01/04/2024	Last EDR Contact: 12/28/2023
Number of Days to Update: 93	Next Scheduled EDR Contact: 04/15/2024
	Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 11/10/2023
 Date Data Arrived at EDR: 11/10/2023
 Date Made Active in Reports: 02/07/2024
 Number of Days to Update: 89

Source: EPA
 Telephone: 800-385-6164
 Last EDR Contact: 11/10/2023
 Next Scheduled EDR Contact: 02/26/2024
 Data Release Frequency: Quarterly

PFAS NPL: Superfund Sites with PFAS Detections Information

EPA's Office of Land and Emergency Management and EPA Regional Offices maintain data describing what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment.

Date of Government Version: 09/23/2023
 Date Data Arrived at EDR: 10/03/2023
 Date Made Active in Reports: 12/21/2023
 Number of Days to Update: 79

Source: Environmental Protection Agency
 Telephone: 703-603-8895
 Last EDR Contact: 12/28/2023
 Next Scheduled EDR Contact: 04/15/2024
 Data Release Frequency: Varies

PFAS FEDERAL SITES: Federal Sites PFAS Information

Several federal entities, such as the federal Superfund program, Department of Defense, National Aeronautics and Space Administration, Department of Transportation, and Department of Energy provided information for sites with known or suspected detections at federal facilities.

Date of Government Version: 09/23/2023
 Date Data Arrived at EDR: 10/03/2023
 Date Made Active in Reports: 12/21/2023
 Number of Days to Update: 79

Source: Environmental Protection Agency
 Telephone: 202-272-0167
 Last EDR Contact: 12/28/2023
 Next Scheduled EDR Contact: 04/15/2024
 Data Release Frequency: Varies

PFAS TRIS: List of PFAS Added to the TRI

Section 7321 of the National Defense Authorization Act for Fiscal Year 2020 (NDAA) immediately added certain per- and polyfluoroalkyl substances (PFAS) to the list of chemicals covered by the Toxics Release Inventory (TRI) under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) and provided a framework for additional PFAS to be added to TRI on an annual basis.

Date of Government Version: 12/28/2023
 Date Data Arrived at EDR: 12/28/2023
 Date Made Active in Reports: 01/04/2024
 Number of Days to Update: 7

Source: Environmental Protection Agency
 Telephone: 202-566-0250
 Last EDR Contact: 12/28/2023
 Next Scheduled EDR Contact: 04/15/2024
 Data Release Frequency: Varies

PFAS TSCA: PFAS Manufacture and Imports Information

EPA issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. EPA publishes non-confidential business information (non-CBI) and includes descriptive information about each site, corporate parent, production volume, other manufacturing information, and processing and use information.

Date of Government Version: 12/28/2023
 Date Data Arrived at EDR: 12/28/2023
 Date Made Active in Reports: 01/04/2024
 Number of Days to Update: 7

Source: Environmental Protection Agency
 Telephone: 202-272-0167
 Last EDR Contact: 12/28/2023
 Next Scheduled EDR Contact: 04/15/2024
 Data Release Frequency: Varies

PFAS RCRA MANIFEST: PFAS Transfers Identified In the RCRA Database Listing

To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: PFAS, PFOA, PFOS, PERFL, AFFF, GENX, GEN-X (plus the VT waste codes). These keywords were searched for in the following text fields: Manifest handling instructions (MANIFEST_HANDLING_INSTR), Non-hazardous waste description (NON_HAZ_WASTE_DESCRIPTION), DOT printed information (DOT_PRINTED_INFORMATION), Waste line handling instructions (WASTE_LINE_HANDLING_INSTR), Waste residue comments (WASTE_RESIDUE_COMMENTS).

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/28/2023
 Date Data Arrived at EDR: 12/28/2023
 Date Made Active in Reports: 01/04/2024
 Number of Days to Update: 7

Source: Environmental Protection Agency
 Telephone: 202-272-0167
 Last EDR Contact: 12/28/2023
 Next Scheduled EDR Contact: 04/15/2024
 Data Release Frequency: Varies

PFAS ATSDR: PFAS Contamination Site Location Listing

PFAS contamination site locations from the Department of Health & Human Services, Center for Disease Control & Prevention. ATSDR is involved at a number of PFAS-related sites, either directly or through assisting state and federal partners. As of now, most sites are related to drinking water contamination connected with PFAS production facilities or fire training areas where aqueous film-forming firefighting foam (AFFF) was regularly used.

Date of Government Version: 06/24/2020
 Date Data Arrived at EDR: 03/17/2021
 Date Made Active in Reports: 11/08/2022
 Number of Days to Update: 601

Source: Department of Health & Human Services
 Telephone: 202-741-5770
 Last EDR Contact: 01/22/2024
 Next Scheduled EDR Contact: 05/06/2024
 Data Release Frequency: Varies

PFAS WQP: Ambient Environmental Sampling for PFAS

The Water Quality Portal (WQP) is a part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations and individuals submit project details and sampling results to this public repository. The information is commonly used for research and assessments of environmental quality.

Date of Government Version: 09/23/2023
 Date Data Arrived at EDR: 10/03/2023
 Date Made Active in Reports: 10/10/2023
 Number of Days to Update: 7

Source: Environmental Protection Agency
 Telephone: 202-272-0167
 Last EDR Contact: 12/28/2023
 Next Scheduled EDR Contact: 04/15/2024
 Data Release Frequency: Varies

PFAS NPDES: Clean Water Act Discharge Monitoring Information

Any discharger of pollutants to waters of the United States from a point source must have a National Pollutant Discharge Elimination System (NPDES) permit. The process for obtaining limits involves the regulated entity (permittee) disclosing releases in a NPDES permit application and the permitting authority (typically the state but sometimes EPA) deciding whether to require monitoring or monitoring with limits. Caveats and Limitations: Less than half of states have required PFAS monitoring for at least one of their permittees and fewer states have established PFAS effluent limits for permittees. New rulemakings have been initiated that may increase the number of facilities monitoring for PFAS in the future.

Date of Government Version: 09/23/2023
 Date Data Arrived at EDR: 10/03/2023
 Date Made Active in Reports: 01/04/2024
 Number of Days to Update: 93

Source: Environmental Protection Agency
 Telephone: 202-272-0167
 Last EDR Contact: 12/28/2023
 Next Scheduled EDR Contact: 04/15/2024
 Data Release Frequency: Varies

PFAS ECHO: Facilities in Industries that May Be Handling PFAS Listing

Regulators and the public have expressed interest in knowing which regulated entities may be using PFAS. EPA has developed a dataset from various sources that show which industries may be handling PFAS. Approximately 120,000 facilities subject to federal environmental programs have operated or currently operate in industry sectors with processes that may involve handling and/or release of PFAS.

Date of Government Version: 09/23/2023
 Date Data Arrived at EDR: 10/03/2023
 Date Made Active in Reports: 12/21/2023
 Number of Days to Update: 79

Source: Environmental Protection Agency
 Telephone: 202-272-0167
 Last EDR Contact: 12/28/2023
 Next Scheduled EDR Contact: 04/15/2024
 Data Release Frequency: Varies

PFAS ECHO FIRE TRAINING: Facilities in Industries that May Be Handling PFAS Listing

A list of fire training sites was added to the Industry Sectors dataset using a keyword search on the permitted facility's name to identify sites where fire-fighting foam may have been used in training exercises. Additionally, you may view an example spreadsheet of the subset of fire training facility data, as well as the keywords used in selecting or deselecting a facility for the subset. as well as the keywords used in selecting or deselecting a facility for the subset. These keywords were tested to maximize accuracy in selecting facilities that may use fire-fighting foam in training exercises, however, due to the lack of a required reporting field in the data systems for designating fire training sites, this methodology may not identify all fire training sites or may potentially misidentify them.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 09/23/2023
 Date Data Arrived at EDR: 10/03/2023
 Date Made Active in Reports: 12/21/2023
 Number of Days to Update: 79

Source: Environmental Protection Agency
 Telephone: 202-272-0167
 Last EDR Contact: 12/28/2023
 Next Scheduled EDR Contact: 04/15/2024
 Data Release Frequency: Varies

PFAS PART 139 AIRPORT: All Certified Part 139 Airports PFAS Information Listing

Since July 1, 2006, all certified part 139 airports are required to have fire-fighting foam onsite that meet military specifications (MIL-F-24385) (14 CFR 139.317). To date, these military specification fire-fighting foams are fluorinated and have been historically used for training and extinguishing. The 2018 FAA Reauthorization Act has a provision stating that no later than October 2021, FAA shall not require the use of fluorinated AFFF. This provision does not prohibit the use of fluorinated AFFF at Part 139 civilian airports; it only prohibits FAA from mandating its use. The Federal Aviation Administration's document AC 150/5210-6D - Aircraft Fire Extinguishing Agents provides guidance on Aircraft Fire Extinguishing Agents, which includes Aqueous Film Forming Foam (AFFF).

Date of Government Version: 09/23/2023
 Date Data Arrived at EDR: 10/03/2023
 Date Made Active in Reports: 12/21/2023
 Number of Days to Update: 79

Source: Environmental Protection Agency
 Telephone: 202-272-0167
 Last EDR Contact: 12/28/2023
 Next Scheduled EDR Contact: 04/15/2024
 Data Release Frequency: Varies

AQUEOUS FOAM NRC: Aqueous Foam Related Incidents Listing

The National Response Center (NRC) serves as an emergency call center that fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. The spreadsheets posted to the NRC website contain initial incident data that has not been validated or investigated by a federal/state response agency. Response center calls from 1990 to the most recent complete calendar year where there was indication of Aqueous Film Forming Foam (AFFF) usage are included in this dataset. NRC calls may reference AFFF usage in the ?Material Involved? or ?Incident Description? fields.

Date of Government Version: 09/23/2023
 Date Data Arrived at EDR: 10/03/2023
 Date Made Active in Reports: 12/21/2023
 Number of Days to Update: 79

Source: Environmental Protection Agency
 Telephone: 202-267-2675
 Last EDR Contact: 12/28/2023
 Next Scheduled EDR Contact: 04/15/2024
 Data Release Frequency: Varies

PCS ENF: Enforcement data

No description is available for this data

Date of Government Version: 12/31/2014
 Date Data Arrived at EDR: 02/05/2015
 Date Made Active in Reports: 03/06/2015
 Number of Days to Update: 29

Source: EPA
 Telephone: 202-564-2497
 Last EDR Contact: 12/27/2023
 Next Scheduled EDR Contact: 04/15/2024
 Data Release Frequency: Varies

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 12/16/2016
 Date Data Arrived at EDR: 01/06/2017
 Date Made Active in Reports: 03/10/2017
 Number of Days to Update: 63

Source: EPA, Office of Water
 Telephone: 202-564-2496
 Last EDR Contact: 12/27/2023
 Next Scheduled EDR Contact: 04/15/2024
 Data Release Frequency: No Update Planned

BIOSOLIDS: ICIS-NPDES Biosolids Facility Data

The data reflects compliance information about facilities in the biosolids program.

Date of Government Version: 12/31/2023
 Date Data Arrived at EDR: 01/03/2024
 Date Made Active in Reports: 01/16/2024
 Number of Days to Update: 13

Source: Environmental Protection Agency
 Telephone: 202-564-4700
 Last EDR Contact: 01/03/2024
 Next Scheduled EDR Contact: 04/29/2024
 Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING**PFAS: PFAS Detections Site Listing**

The presence of PFAS contamination at locations, including water treatment plants.

Date of Government Version: 03/06/2023
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 05/26/2023
Number of Days to Update: 78

Source: Department of Environmental Protection
Telephone: 502-564-3410
Last EDR Contact: 11/28/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

AIRS: Permitted Airs Facility Listing

A listing of permitted Airs facilities.

Date of Government Version: 11/07/2023
Date Data Arrived at EDR: 11/08/2023
Date Made Active in Reports: 02/05/2024
Number of Days to Update: 89

Source: Department of Environmental Protection
Telephone: 502-573-3382
Last EDR Contact: 01/22/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Semi-Annually

ASBESTOS: Asbestos Notification Listing

Asbestos sites

Date of Government Version: 09/21/2023
Date Data Arrived at EDR: 09/22/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 81

Source: Department of Environmental Protection
Telephone: 502-782-6780
Last EDR Contact: 11/21/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Varies

COAL ASH: Coal Ash Disposal Sites

A listing of coal ash pond site locations.

Date of Government Version: 08/22/2023
Date Data Arrived at EDR: 10/27/2023
Date Made Active in Reports: 01/17/2024
Number of Days to Update: 82

Source: Department of Environmental Protection
Telephone: 502-564-6716
Last EDR Contact: 01/23/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: No Update Planned

DRYCLEANERS: Drycleaner Listing

A listing of drycleaner facility locations.

Date of Government Version: 11/07/2023
Date Data Arrived at EDR: 11/08/2023
Date Made Active in Reports: 02/05/2024
Number of Days to Update: 89

Source: Department of Environmental Protection
Telephone: 502-573-3382
Last EDR Contact: 01/22/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Semi-Annually

Financial Assurance 1: Financial Assurance Information Listing

A listing of financial assurance information.

Date of Government Version: 11/06/2023
Date Data Arrived at EDR: 11/09/2023
Date Made Active in Reports: 02/02/2024
Number of Days to Update: 85

Source: Department of Environmental Protection
Telephone: 502-564-6716
Last EDR Contact: 01/22/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

Financial Assurance information for underground storage tank facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 05/14/2014
Date Data Arrived at EDR: 06/06/2014
Date Made Active in Reports: 06/24/2014
Number of Days to Update: 18

Source: Department of Environmental Protection
Telephone: 502-564-5981
Last EDR Contact: 01/22/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING**Financial Assurance 3: Financial Assurance Information Listing**

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 11/09/2023	Source: Department of Environmental Protection
Date Data Arrived at EDR: 11/09/2023	Telephone: 502-564-6716
Date Made Active in Reports: 11/13/2023	Last EDR Contact: 01/22/2024
Number of Days to Update: 4	Next Scheduled EDR Contact: 05/06/2024
	Data Release Frequency: Varies

LEAD: Environmental Lead Program Report Tracking Database

Lead Report Tracking Database

Date of Government Version: 01/27/2017	Source: Department of Public Health
Date Data Arrived at EDR: 02/02/2017	Telephone: 502-564-4537
Date Made Active in Reports: 08/21/2017	Last EDR Contact: 01/29/2024
Number of Days to Update: 200	Next Scheduled EDR Contact: 05/13/2024
	Data Release Frequency: Varies

NPDES: Permitted Facility Listing

A listing of permitted wastewater facilities.

Date of Government Version: 11/06/2023	Source: Department of Environmental Protection
Date Data Arrived at EDR: 11/09/2023	Telephone: 502-564-3410
Date Made Active in Reports: 02/05/2024	Last EDR Contact: 01/29/2024
Number of Days to Update: 88	Next Scheduled EDR Contact: 05/13/2024
	Data Release Frequency: Semi-Annually

UIC: UIC Information

A listing of wells identified as underground injection wells, in the Kentucky Oil & Gas Wells data base.

Date of Government Version: 09/28/2023	Source: Kentucky Geological Survey
Date Data Arrived at EDR: 10/10/2023	Telephone: 859-323-0544
Date Made Active in Reports: 01/02/2024	Last EDR Contact: 01/11/2024
Number of Days to Update: 84	Next Scheduled EDR Contact: 04/22/2024
	Data Release Frequency: Quarterly

UST FINDER: UST Finder Database

EPA developed UST Finder, a web map application containing a comprehensive, state-sourced national map of underground storage tank (UST) and leaking UST (LUST) data. It provides the attributes and locations of active and closed USTs, UST facilities, and LUST sites from states and from Tribal lands and US territories. UST Finder contains information about proximity of UST facilities and LUST sites to: surface and groundwater public drinking water protection areas; estimated number of private domestic wells and number of people living nearby; and flooding and wildfires.

Date of Government Version: 06/08/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 10/04/2023	Telephone: 202-564-0394
Date Made Active in Reports: 01/18/2024	Last EDR Contact: 02/09/2024
Number of Days to Update: 106	Next Scheduled EDR Contact: 05/20/2024
	Data Release Frequency: Varies

UST FINDER RELEASE: UST Finder Releases Database

US EPA's UST Finder data is a national composite of leaking underground storage tanks. This data contains information about, and locations of, leaking underground storage tanks. Data was collected from state sources and standardized into a national profile by EPA's Office of Underground Storage Tanks, Office of Research and Development, and the Association of State and Territorial Solid Waste Management Officials.

Date of Government Version: 06/08/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 10/31/2023	Telephone: 202-564-0394
Date Made Active in Reports: 01/18/2024	Last EDR Contact: 02/09/2024
Number of Days to Update: 79	Next Scheduled EDR Contact: 05/20/2024
	Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/03/2014
Number of Days to Update: 186

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING**RGA LF: Recovered Government Archive Solid Waste Facilities List**

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists.

Date of Government Version: N/A	Source: Department of Environmental Protection
Date Data Arrived at EDR: 07/01/2013	Telephone: N/A
Date Made Active in Reports: 01/15/2014	Last EDR Contact: 06/01/2012
Number of Days to Update: 198	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 11/06/2023	Source: Department of Energy & Environmental Protection
Date Data Arrived at EDR: 11/07/2023	Telephone: 860-424-3375
Date Made Active in Reports: 01/31/2024	Last EDR Contact: 02/06/2024
Number of Days to Update: 85	Next Scheduled EDR Contact: 05/20/2024
	Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2018	Source: Department of Environmental Protection
Date Data Arrived at EDR: 04/10/2019	Telephone: N/A
Date Made Active in Reports: 05/16/2019	Last EDR Contact: 12/27/2023
Number of Days to Update: 36	Next Scheduled EDR Contact: 04/15/2024
	Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 12/31/2019	Source: Department of Environmental Conservation
Date Data Arrived at EDR: 11/30/2023	Telephone: 518-402-8651
Date Made Active in Reports: 12/01/2023	Last EDR Contact: 01/26/2024
Number of Days to Update: 1	Next Scheduled EDR Contact: 05/06/2024
	Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 06/30/2018	Source: Department of Environmental Protection
Date Data Arrived at EDR: 07/19/2019	Telephone: 717-783-8990
Date Made Active in Reports: 09/10/2019	Last EDR Contact: 01/05/2024
Number of Days to Update: 53	Next Scheduled EDR Contact: 04/22/2024
	Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/31/2020
 Date Data Arrived at EDR: 11/30/2021
 Date Made Active in Reports: 02/18/2022
 Number of Days to Update: 80

Source: Department of Environmental Management
 Telephone: 401-222-2797
 Last EDR Contact: 02/12/2024
 Next Scheduled EDR Contact: 05/27/2024
 Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 05/31/2018
 Date Data Arrived at EDR: 06/19/2019
 Date Made Active in Reports: 09/03/2019
 Number of Days to Update: 76

Source: Department of Natural Resources
 Telephone: N/A
 Last EDR Contact: 11/29/2023
 Next Scheduled EDR Contact: 03/18/2024
 Data Release Frequency: Annually

Oil/Gas Pipelines

Source: Endeavor Business Media

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data

Source: Endeavor Business Media

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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.
 Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services
 Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes

Source: National Institutes of Health
 Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools

Source: National Center for Education Statistics
 Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools

Source: National Center for Education Statistics
 Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Certified Child Care Homes

Source: Cabinet for Families & Children
 Telephone: 502-564-7130

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory

Source: Environmental & Public Protection Cabinet

Telephone: 502-564-6736

STREET AND ADDRESS INFORMATION

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APPENDIX E

HISTORICAL RECORDS

Northern Bobwhite Phase 1
Northern Bobwhite Phase 1
Springfield, KY 40069

Inquiry Number: 7566597.1
February 14, 2024

EDR Historical Topo Map Report with QuadMatch™



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

Site Name:

Northern Bobwhite Phase 1
Northern Bobwhite Phase 1
Springfield, KY 40069
EDR Inquiry # 7566597.1

Client Name:

Stantec
10509 Timberwood Circle Suite 100
Louisville, KY 40223-0000
Contact: Lucas Downs



EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Stantec were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

Coordinates:

P.O.# NA
Project: NA

Latitude: 37.6239 37° 37' 26" North
Longitude: -85.2272 -85° 13' 38" West
UTM Zone: Zone 16 North
UTM X Meters: 656445.06
UTM Y Meters: 4165565.08
Elevation: 899.97' above sea level

Maps Provided:

- 2022
- 2019
- 2016
- 2013
- 1979
- 1972
- 1953

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Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2022 Source Sheets



Lebanon East
2022
7.5-minute, 24000



Lebanon West
2022
7.5-minute, 24000



Springfield
2022
7.5-minute, 24000

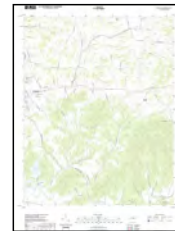


Saint Catharine
2022
7.5-minute, 24000

2019 Source Sheets



Springfield
2019
7.5-minute, 24000



Lebanon East
2019
7.5-minute, 24000



Saint Catharine
2019
7.5-minute, 24000



Lebanon West
2019
7.5-minute, 24000

2016 Source Sheets



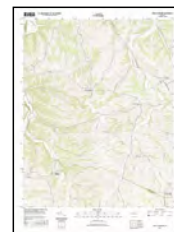
Lebanon East
2016
7.5-minute, 24000



Lebanon West
2016
7.5-minute, 24000

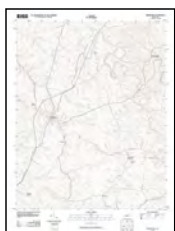


Springfield
2016
7.5-minute, 24000



Saint Catharine
2016
7.5-minute, 24000

2013 Source Sheets



Springfield
2013
7.5-minute, 24000



Lebanon East
2013
7.5-minute, 24000



Saint Catharine
2013
7.5-minute, 24000



Lebanon West
2013
7.5-minute, 24000

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1979 Source Sheets



Saint Catharine
1979
7.5-minute, 24000
Aerial Photo Revised 1976



Springfield
1979
7.5-minute, 24000
Aerial Photo Revised 1976

1972 Source Sheets

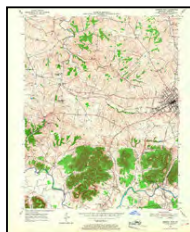


Springfield
1972
7.5-minute, 24000
Aerial Photo Revised 1972

1953 Source Sheets



Lebanon East
1953
7.5-minute, 24000
Aerial Photo Revised 1951



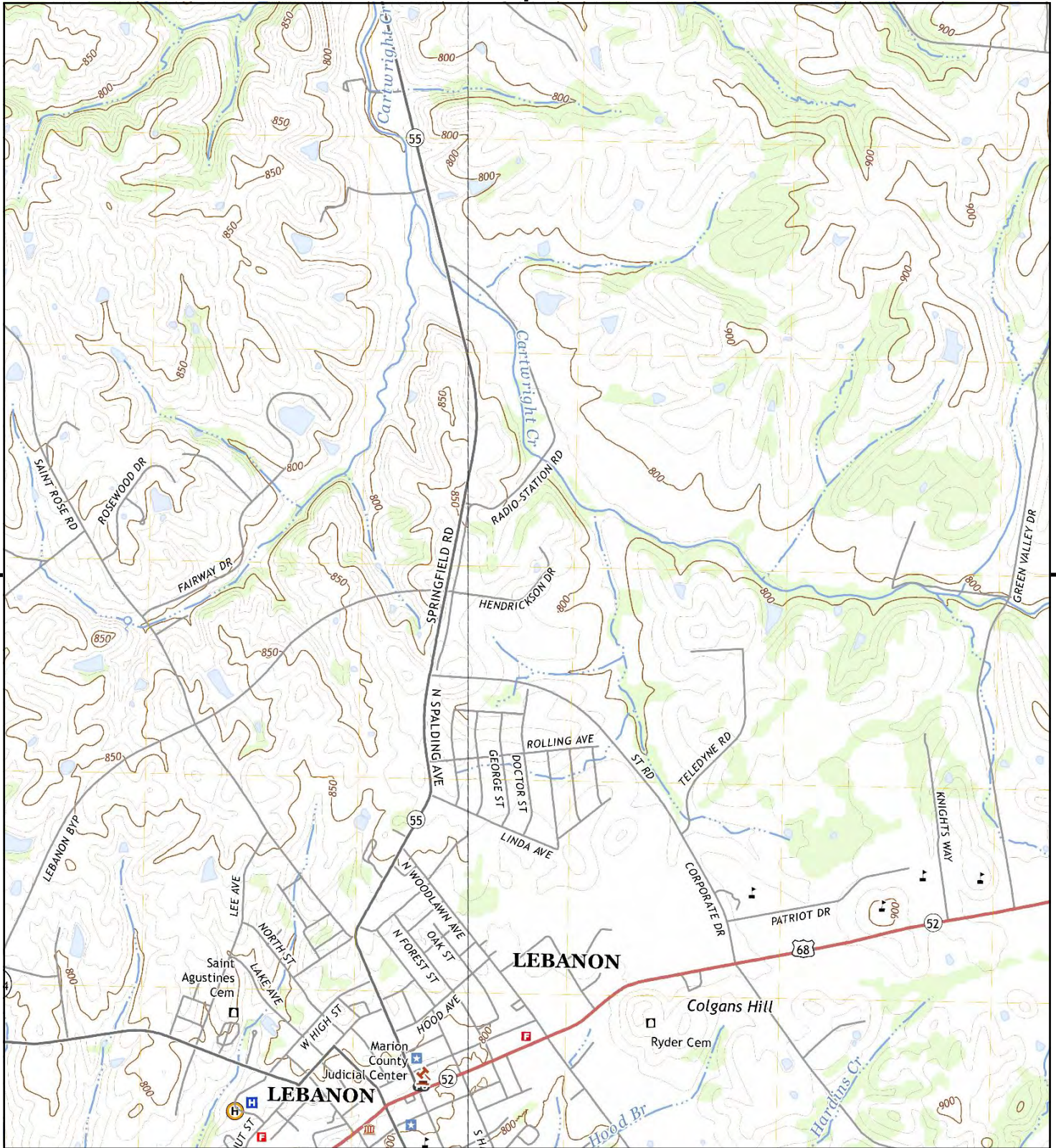
Lebanon West
1953
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Aerial Photo Revised 1951



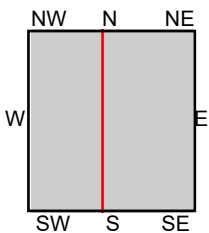
Springfield
1953
7.5-minute, 24000
Aerial Photo Revised 1951



Saint Catharine
1953
7.5-minute, 24000
Aerial Photo Revised 1951



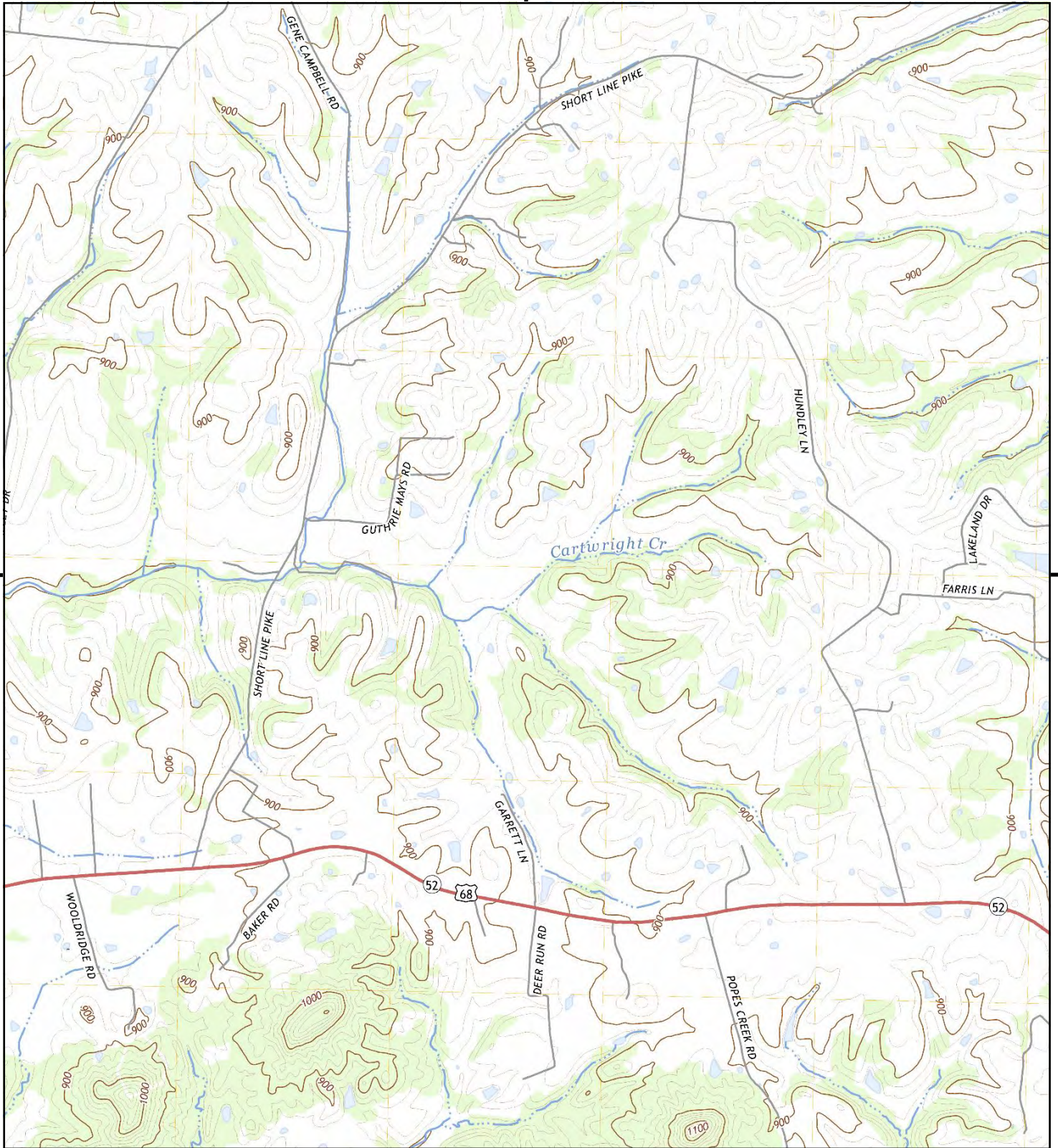
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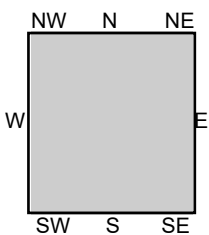
TP, Lebanon East, 2022, 7.5-minute
SW, Lebanon West, 2022, 7.5-minute

SITE NAME: Northern Bobwhite Phase 1
ADDRESS: Northern Bobwhite Phase 1
Springfield, KY 40069
CLIENT: Stantec





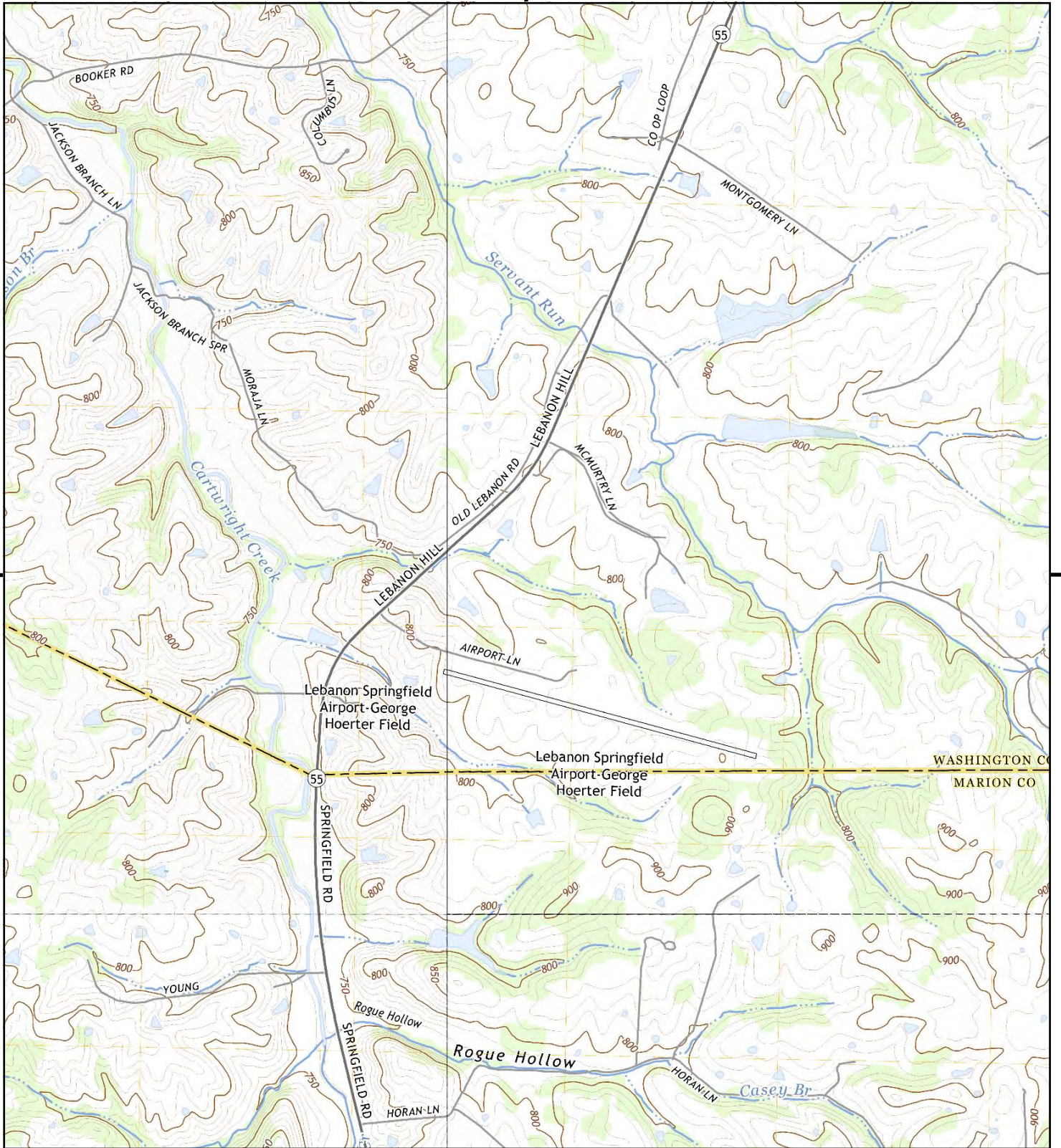
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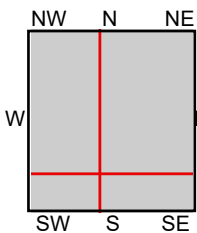
TP, Lebanon East, 2022, 7.5-minute

SITE NAME: Northern Bobwhite Phase 1
ADDRESS: Northern Bobwhite Phase 1
 Springfield, KY 40069
CLIENT: Stantec





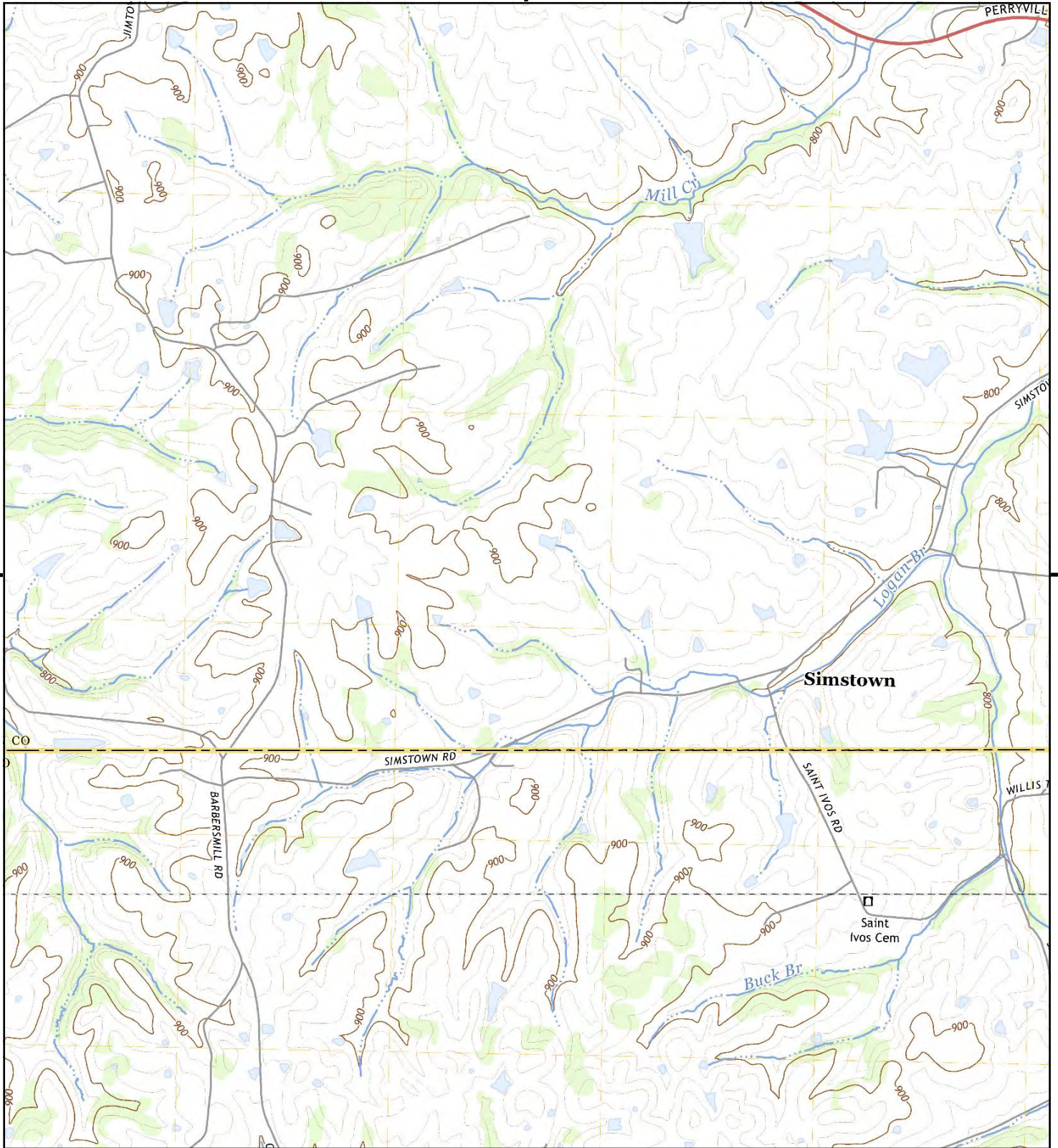
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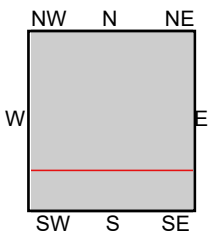
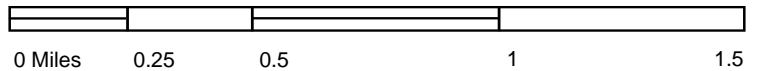
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SE, Lebanon East, 2022, 7.5-minute
S, Lebanon West, 2022, 7.5-minute
NW, Saint Catharine, 2022, 7.5-minute

SITE NAME: Northern Bobwhite Phase 1
ADDRESS: Northern Bobwhite Phase 1
Springfield, KY 40069
CLIENT: Stantec





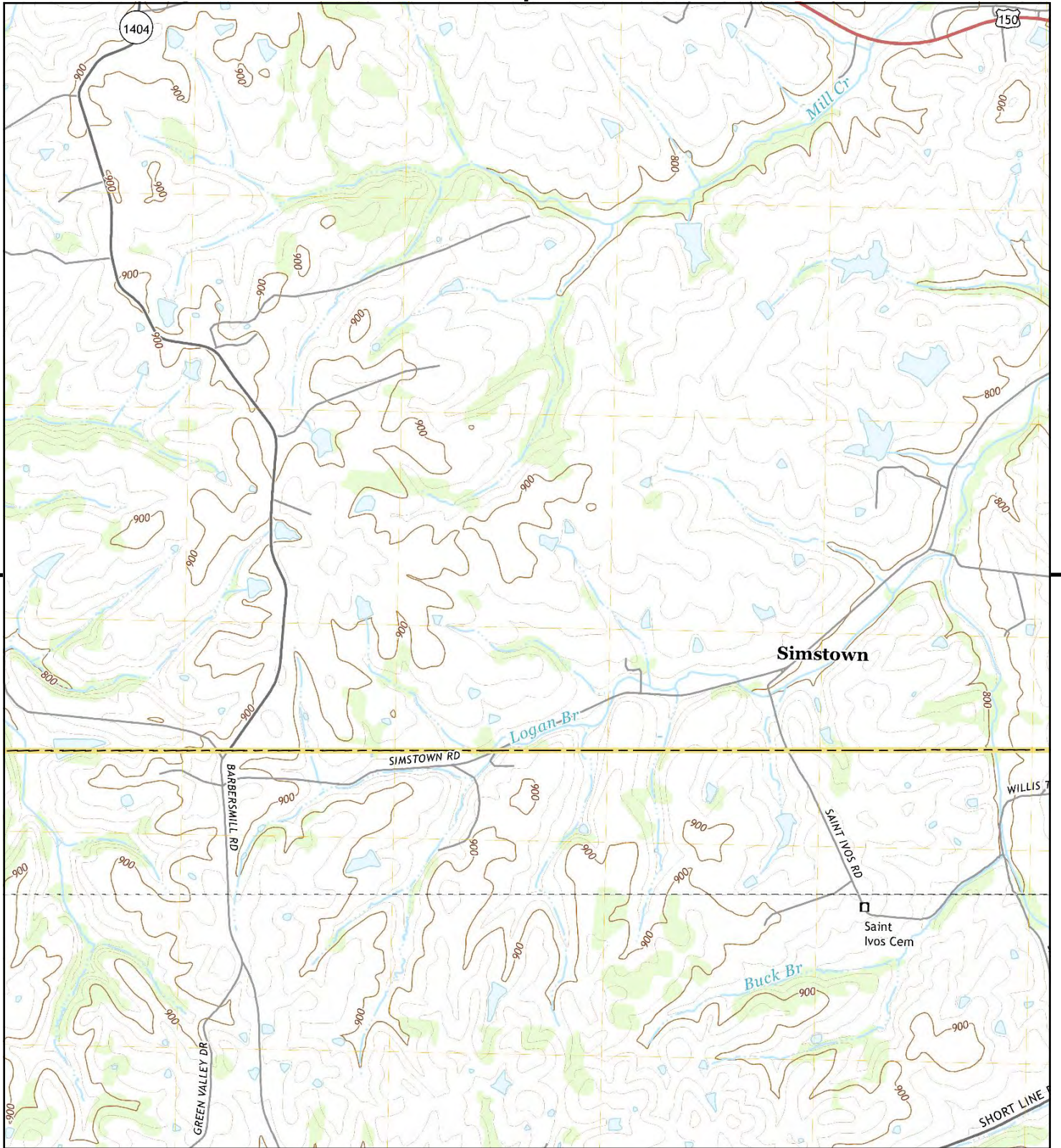
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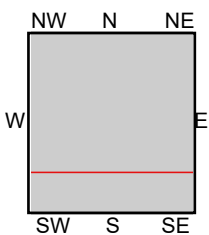
TP, Springfield, 2022, 7.5-minute
S, Lebanon East, 2022, 7.5-minute

SITE NAME: Northern Bobwhite Phase 1
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Springfield, KY 40069
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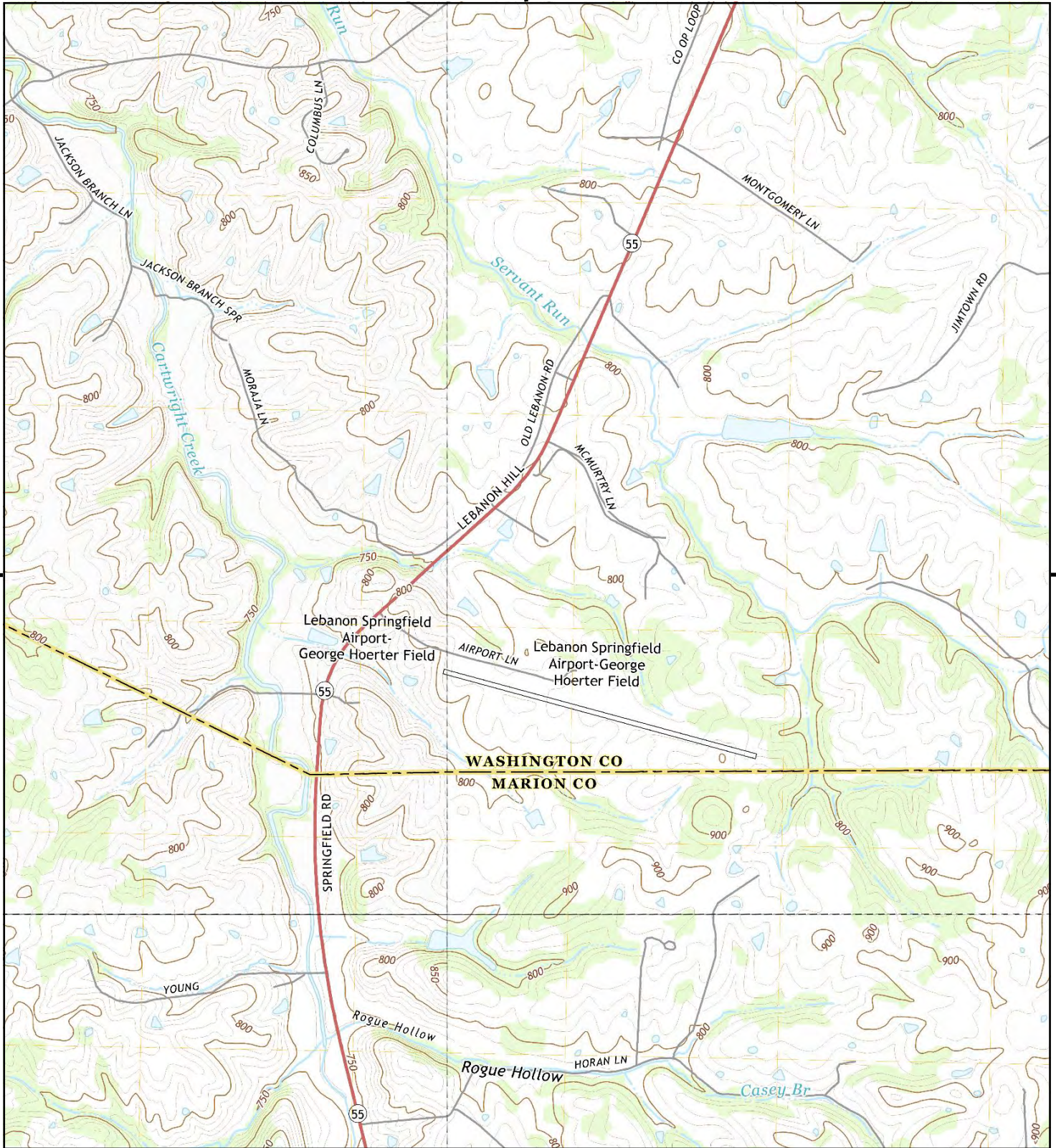
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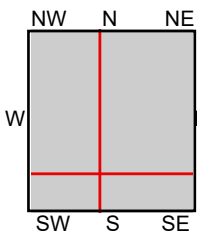
TP, Springfield, 2019, 7.5-minute
S, Lebanon East, 2019, 7.5-minute

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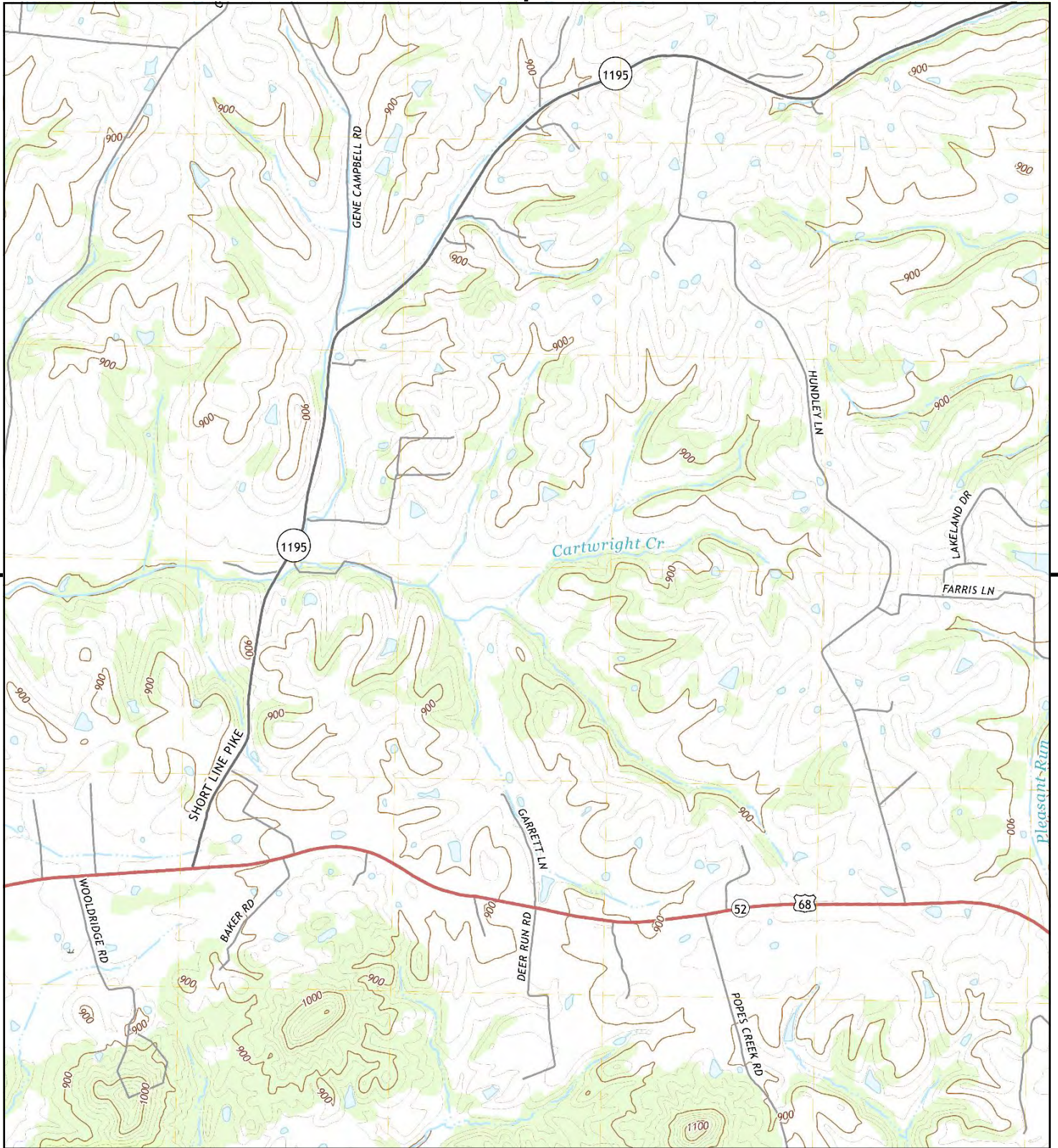
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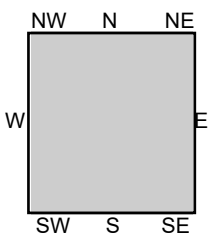
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SITE NAME: Northern Bobwhite Phase 1
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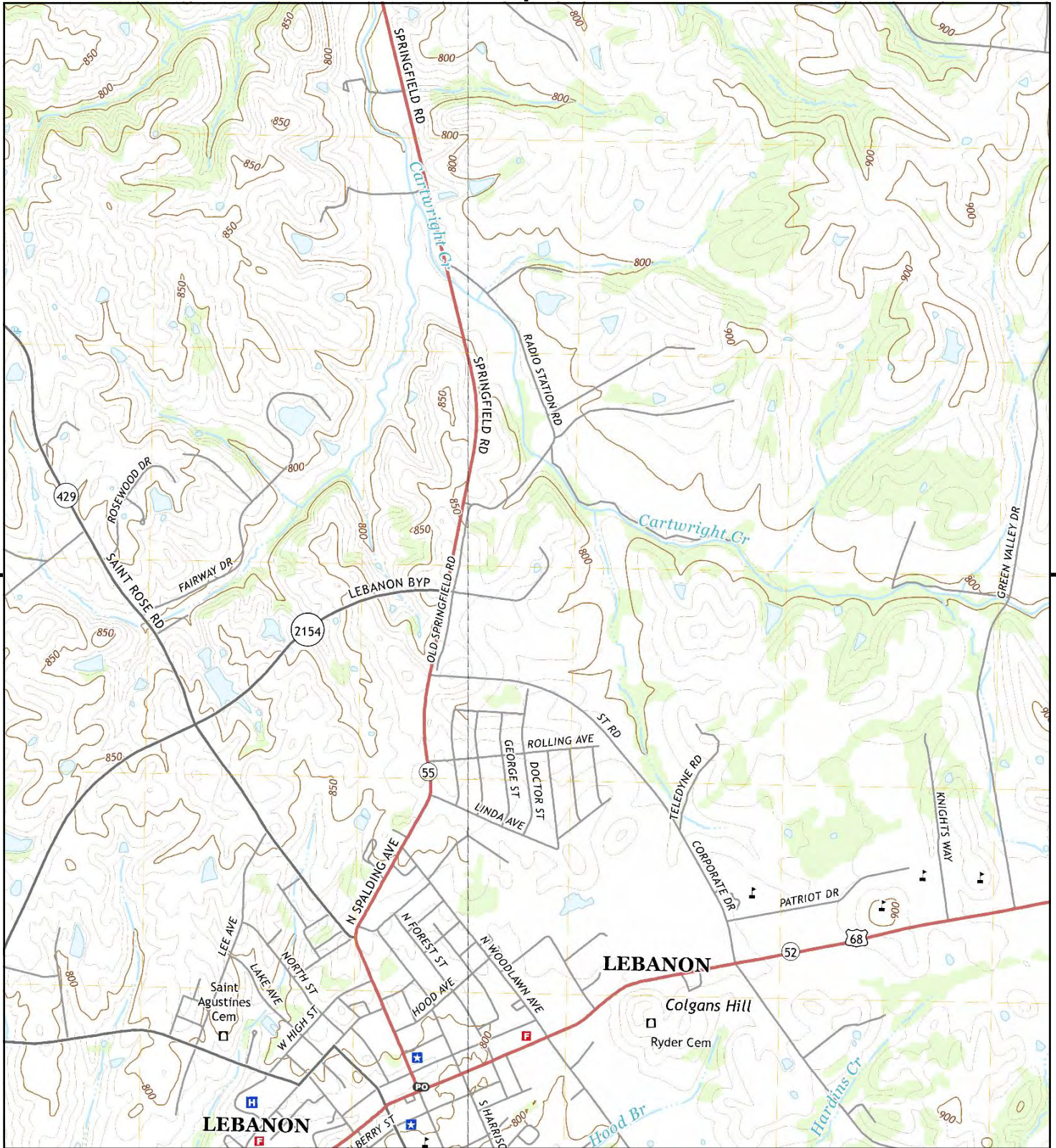
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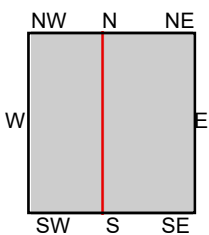
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SITE NAME: Northern Bobwhite Phase 1
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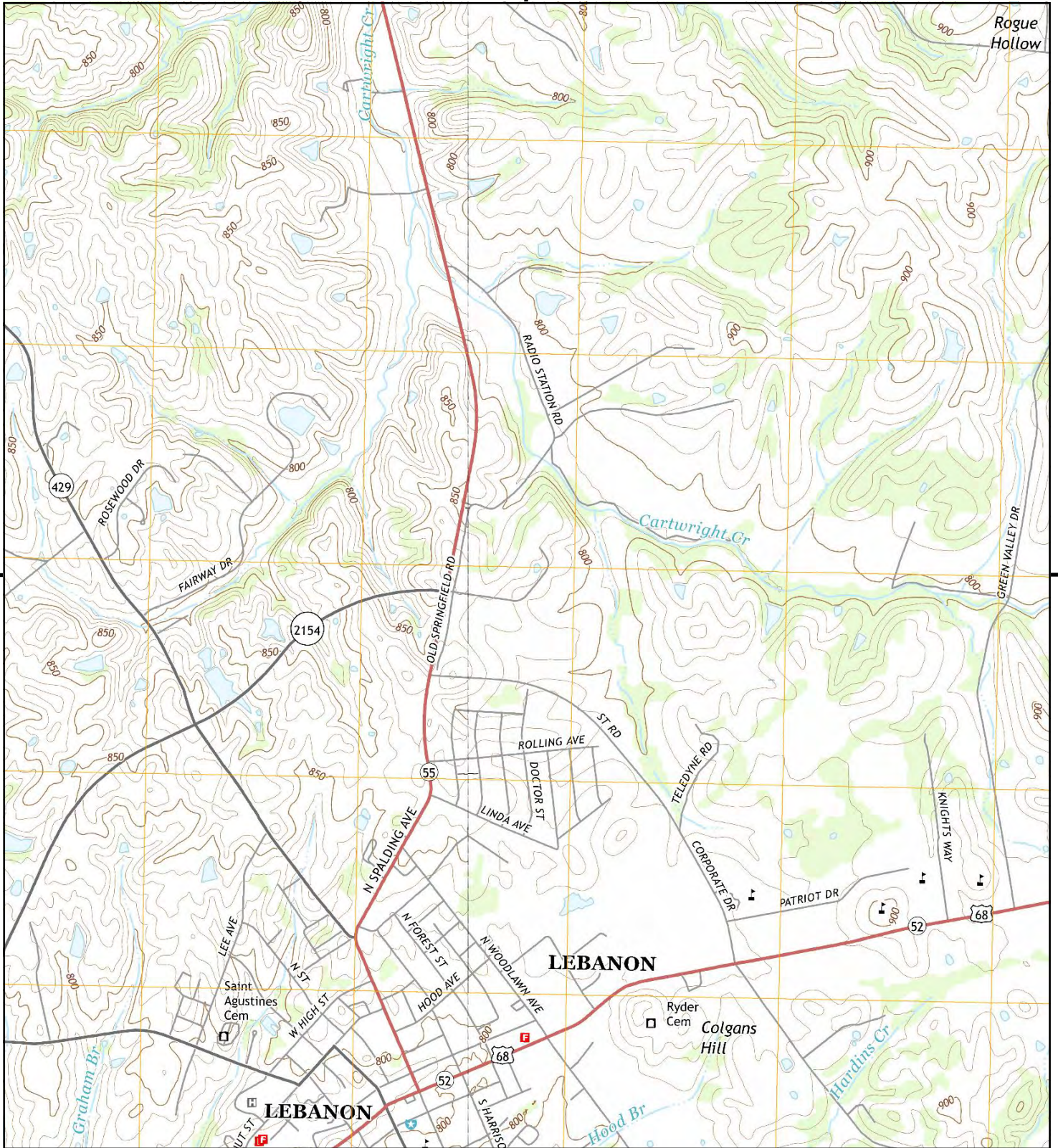
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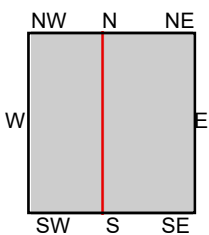
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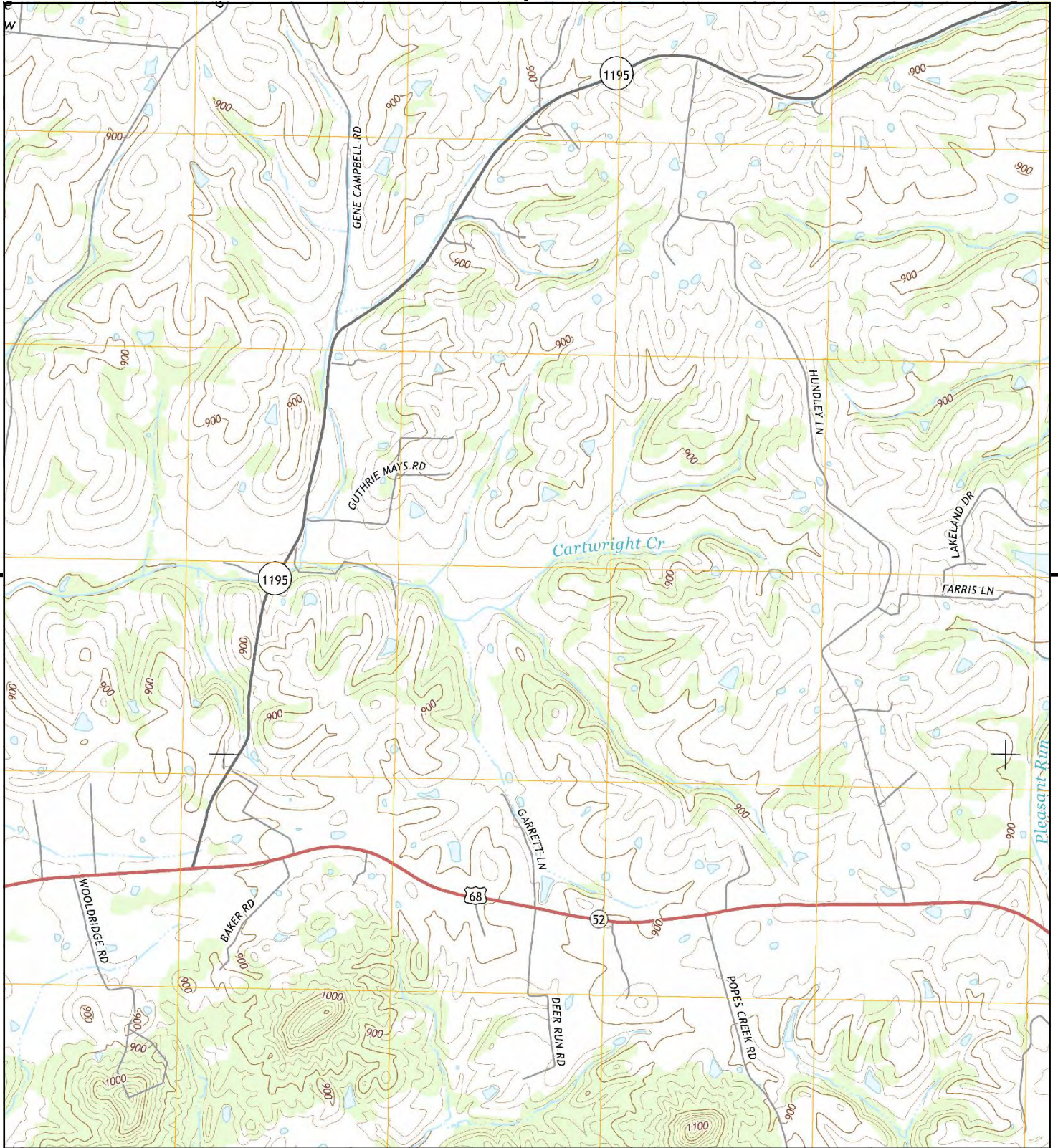
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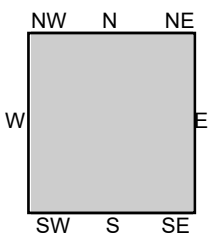
TP, Lebanon East, 2016, 7.5-minute
SW, Lebanon West, 2016, 7.5-minute

SITE NAME: Northern Bobwhite Phase 1
ADDRESS: Northern Bobwhite Phase 1
Springfield, KY 40069
CLIENT: Stantec





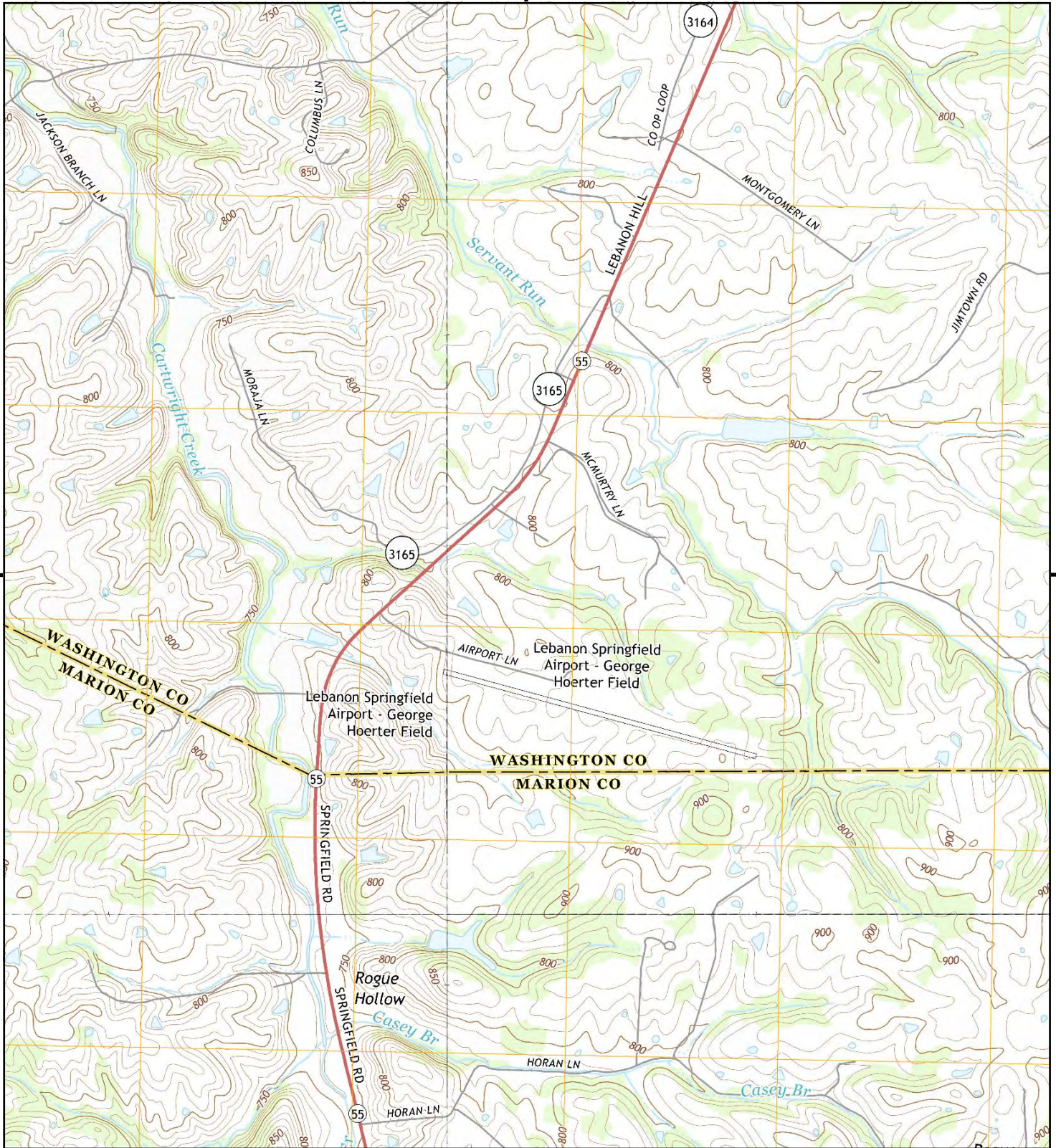
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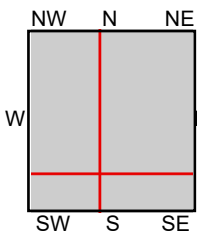
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SITE NAME: Northern Bobwhite Phase 1
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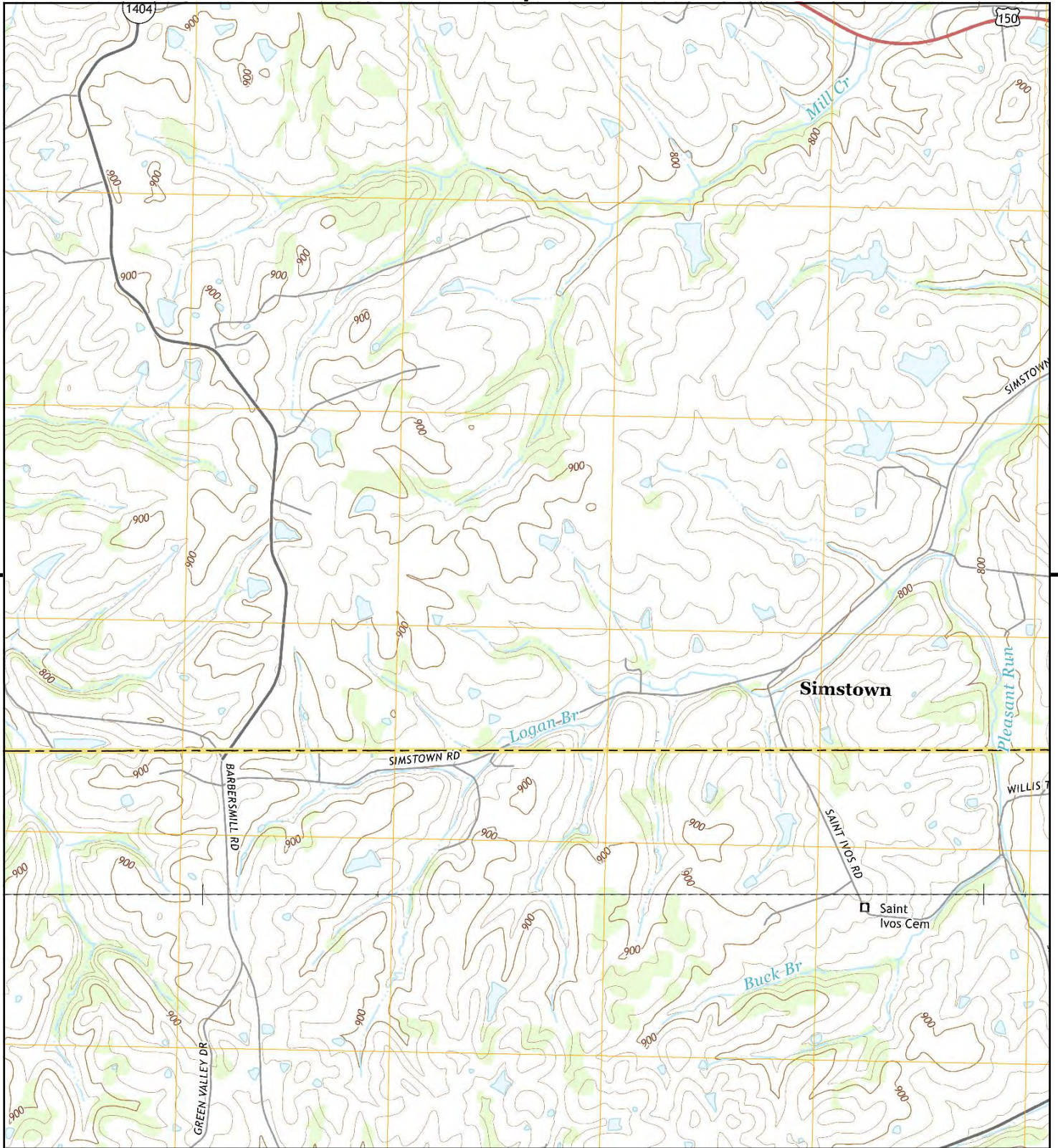
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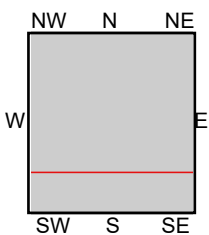
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NW, Saint Catharine, 2016, 7.5-minute

SITE NAME: Northern Bobwhite Phase 1
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Springfield, KY 40069
CLIENT: Stantec





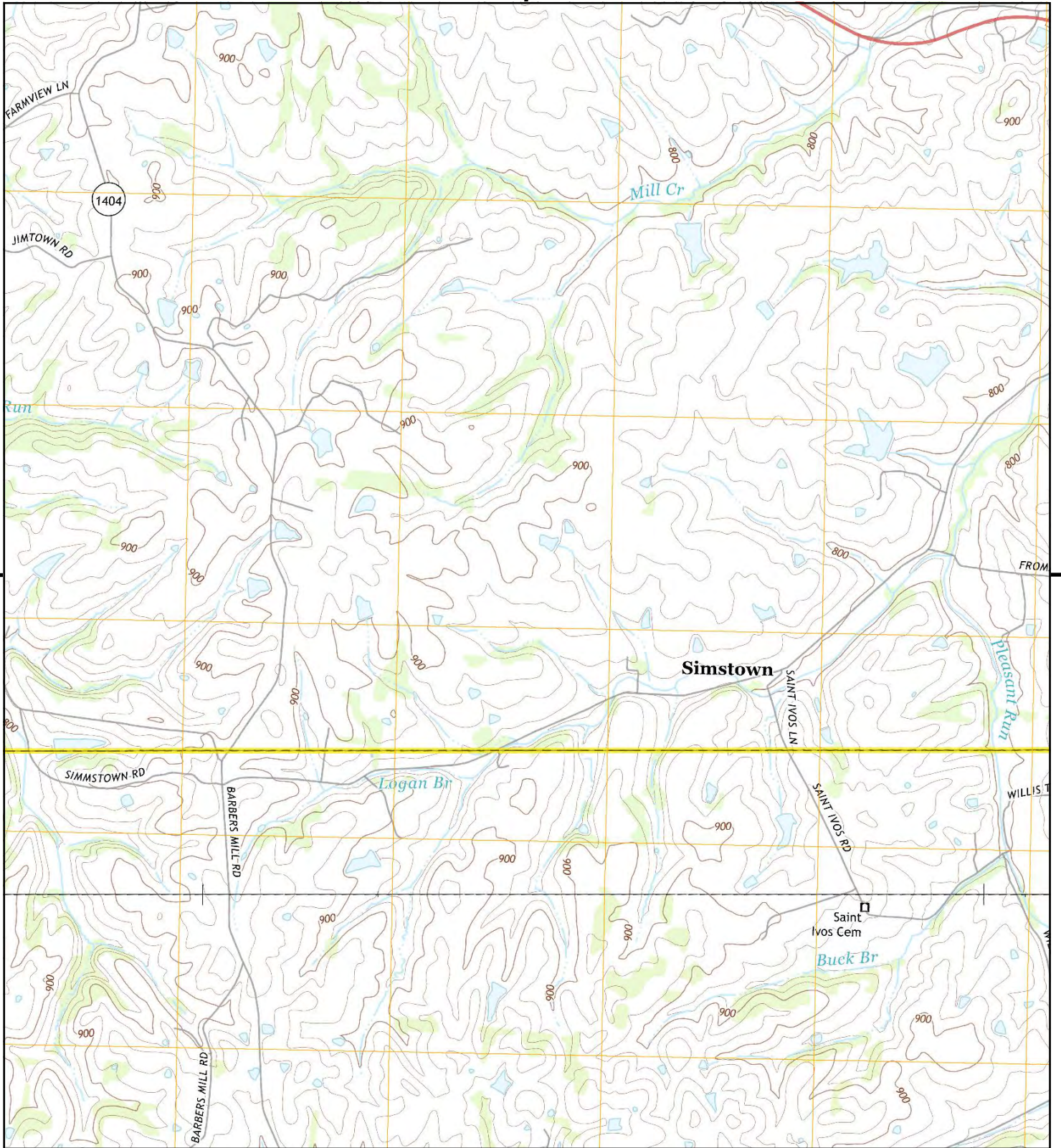
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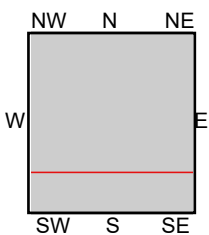
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SITE NAME: Northern Bobwhite Phase 1
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Springfield, KY 40069
CLIENT: Stantec





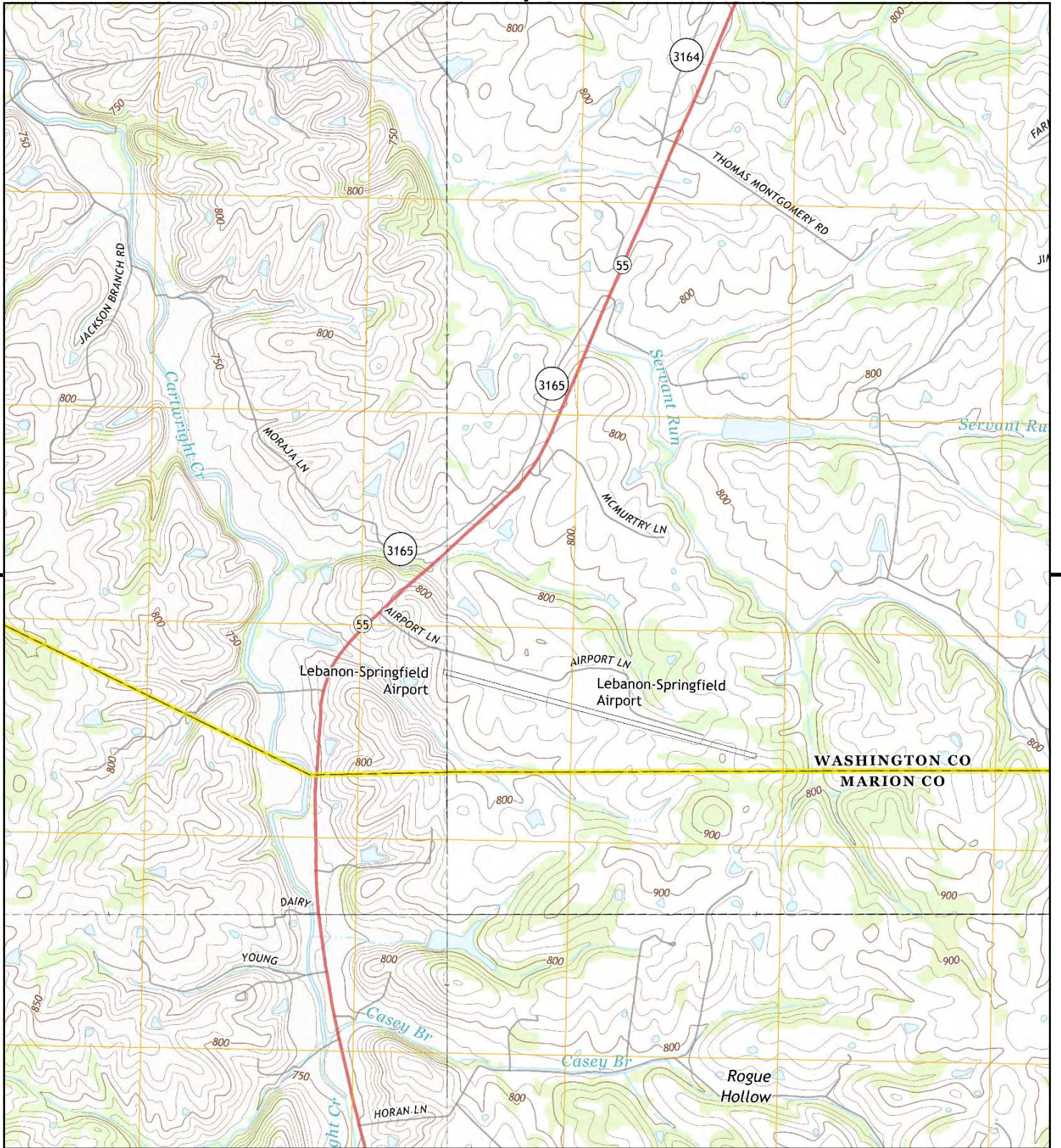
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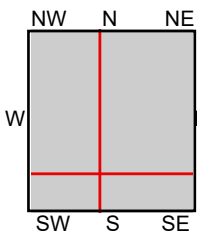
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S, Lebanon East, 2013, 7.5-minute

SITE NAME: Northern Bobwhite Phase 1
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This report includes information from the following map sheet(s).



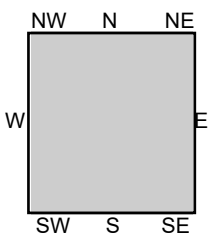
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S, Lebanon West, 2013, 7.5-minute
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SITE NAME: Northern Bobwhite Phase 1
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Springfield, KY 40069
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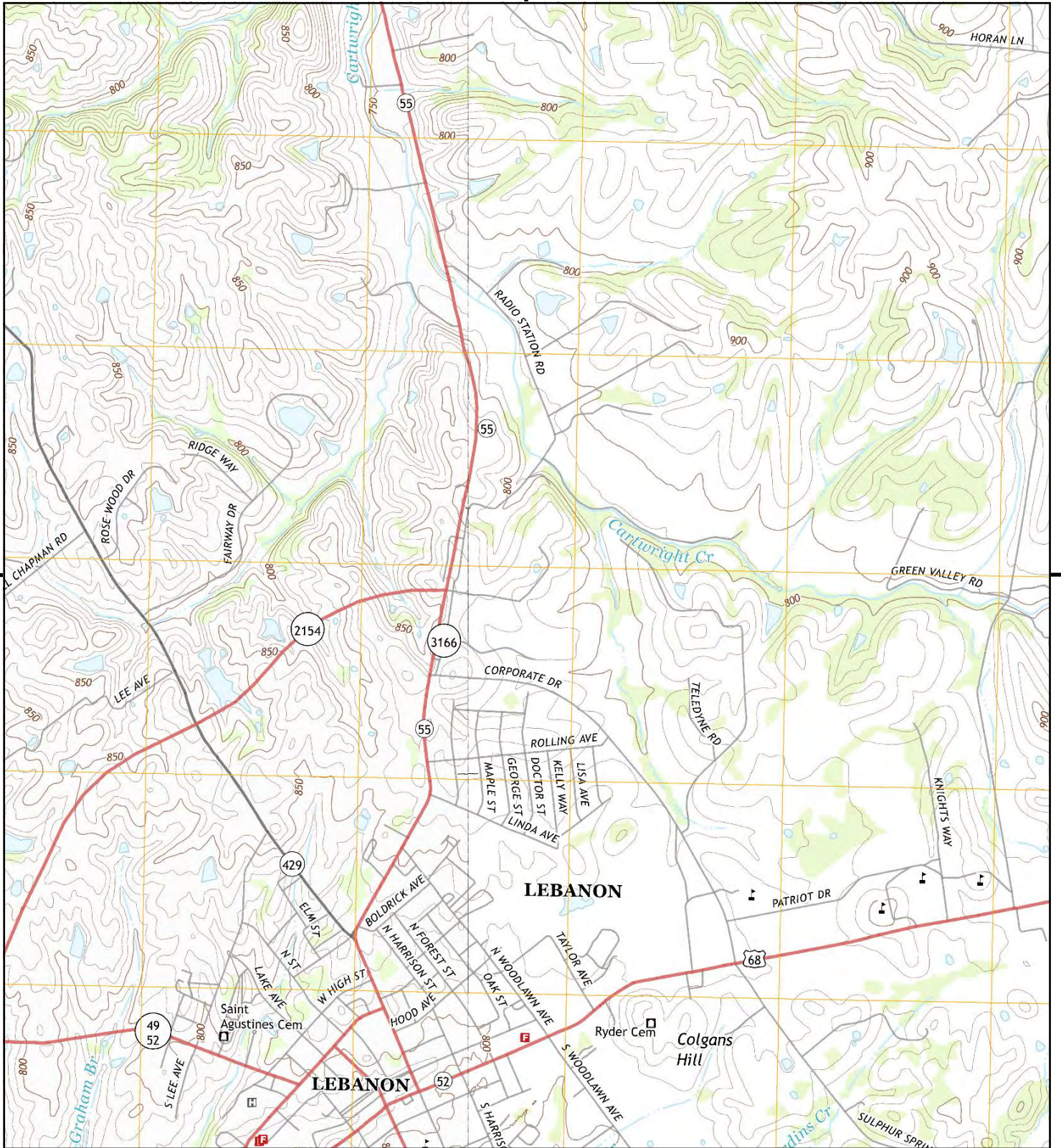
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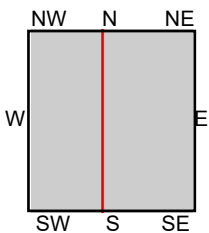
TP, Lebanon East, 2013, 7.5-minute

SITE NAME: Northern Bobwhite Phase 1
ADDRESS: Northern Bobwhite Phase 1
 Springfield, KY 40069
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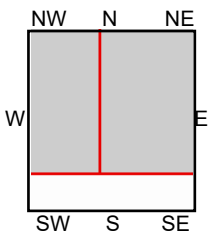
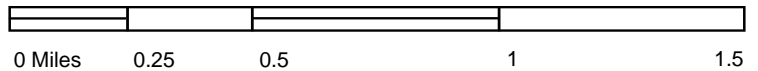
TP, Lebanon East, 2013, 7.5-minute
SW, Lebanon West, 2013, 7.5-minute

SITE NAME: Northern Bobwhite Phase 1
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 Springfield, KY 40069
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This report includes information from the following map sheet(s).



TP, Springfield, 1979, 7.5-minute
 NW, Saint Catharine, 1979, 7.5-minute

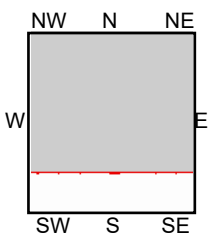
SITE NAME: Northern Bobwhite Phase 1
 ADDRESS: Northern Bobwhite Phase 1
 Springfield, KY 40069
 CLIENT: Stantec





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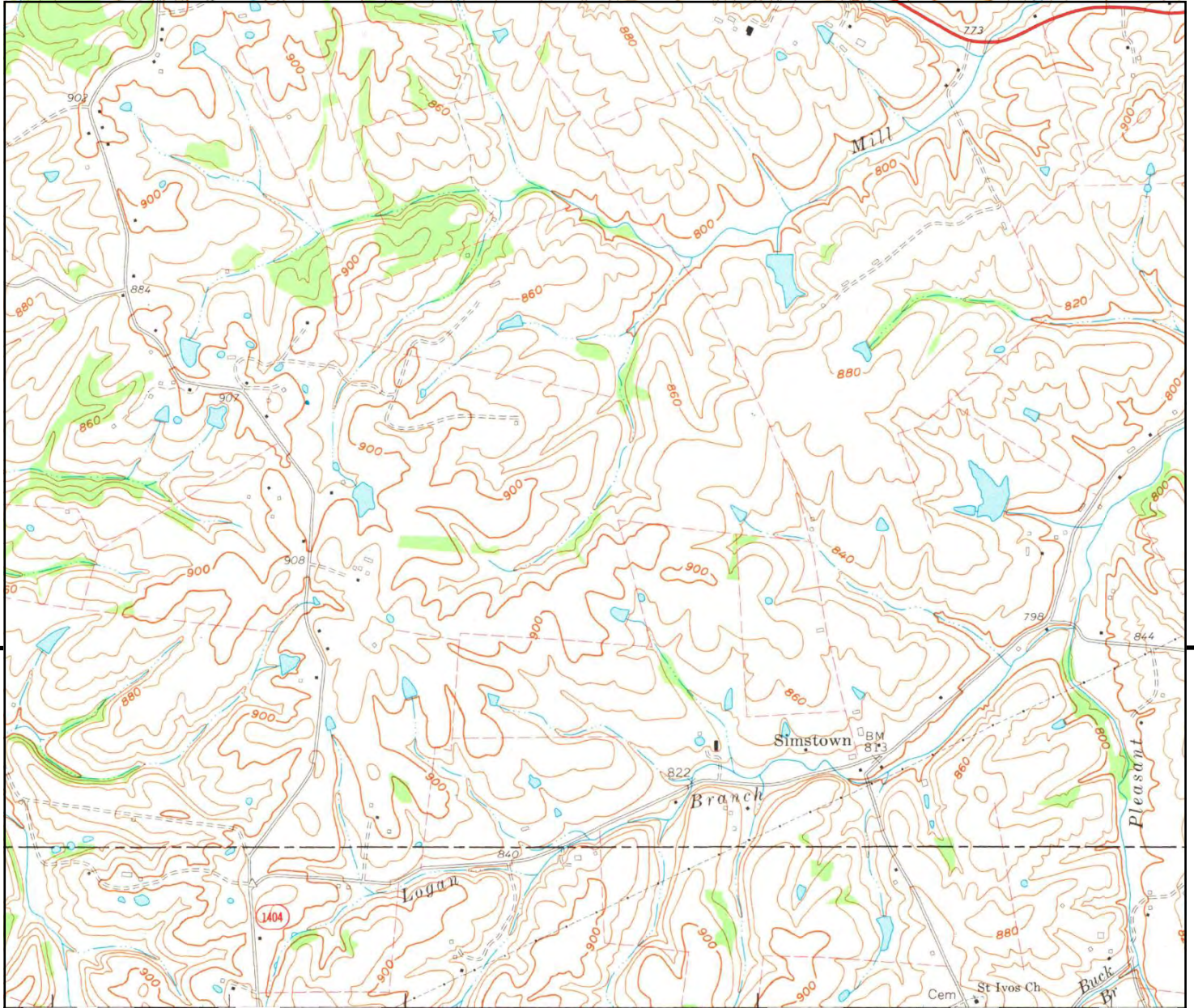
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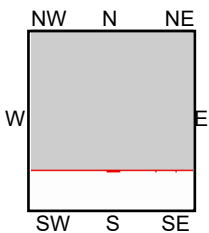
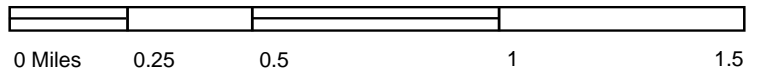
SITE NAME: Northern Bobwhite Phase 1
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 Springfield, KY 40069
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This report includes information from the following map sheet(s).



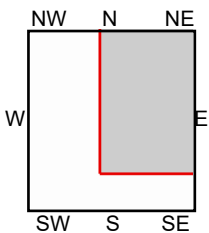
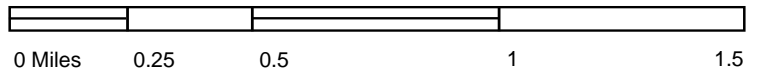
TP, Springfield, 1972, 7.5-minute

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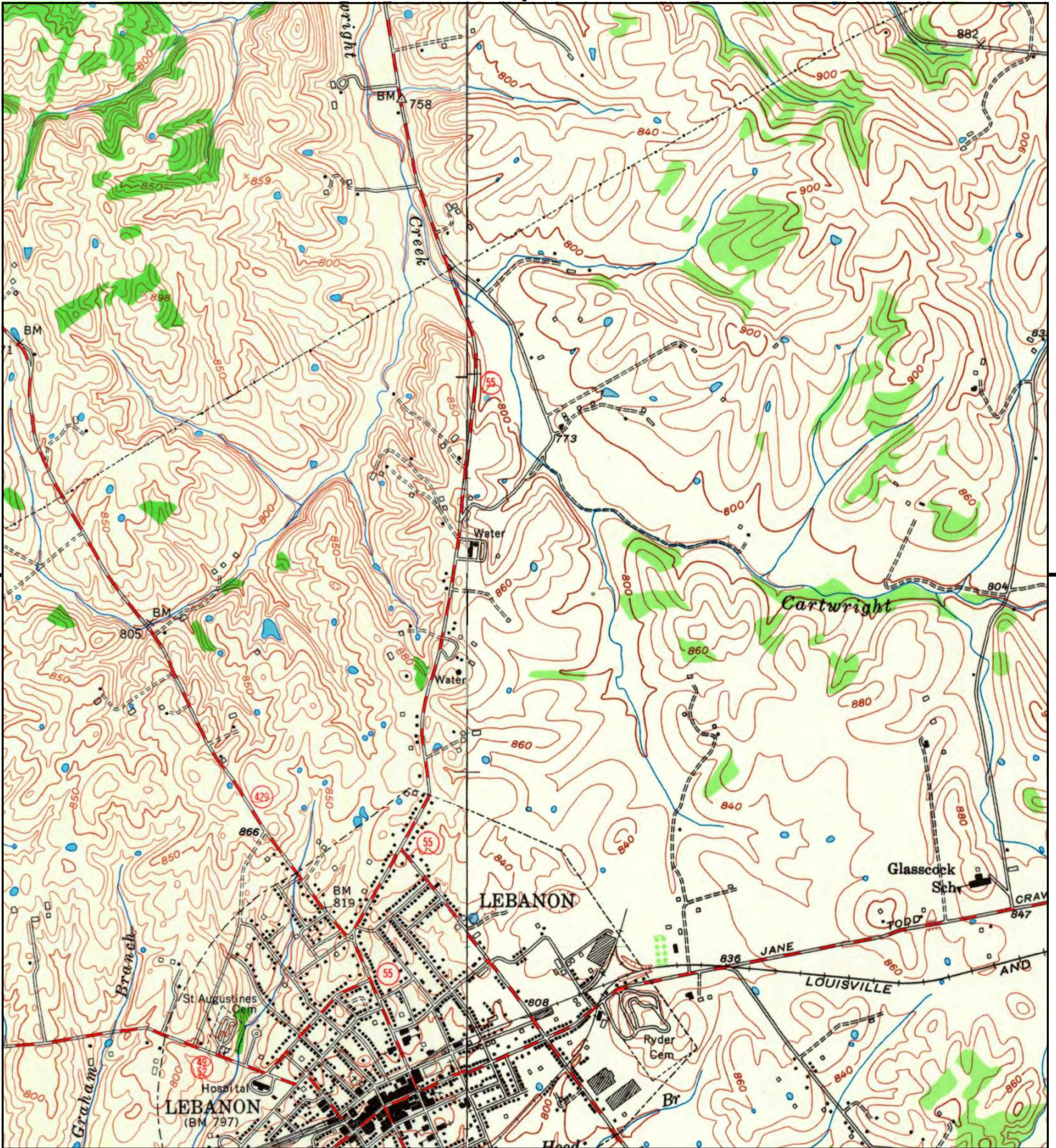
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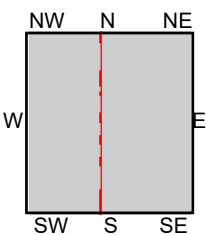
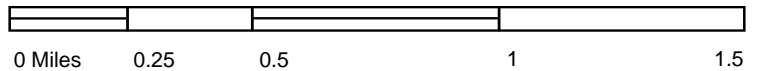
TP, Springfield, 1972, 7.5-minute

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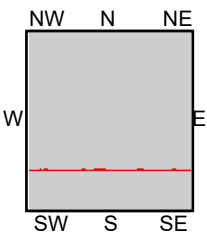
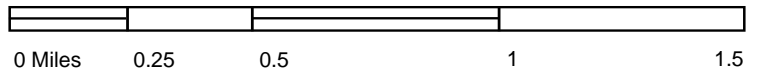
TP, Lebanon East, 1953, 7.5-minute
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SITE NAME: Northern Bobwhite Phase 1
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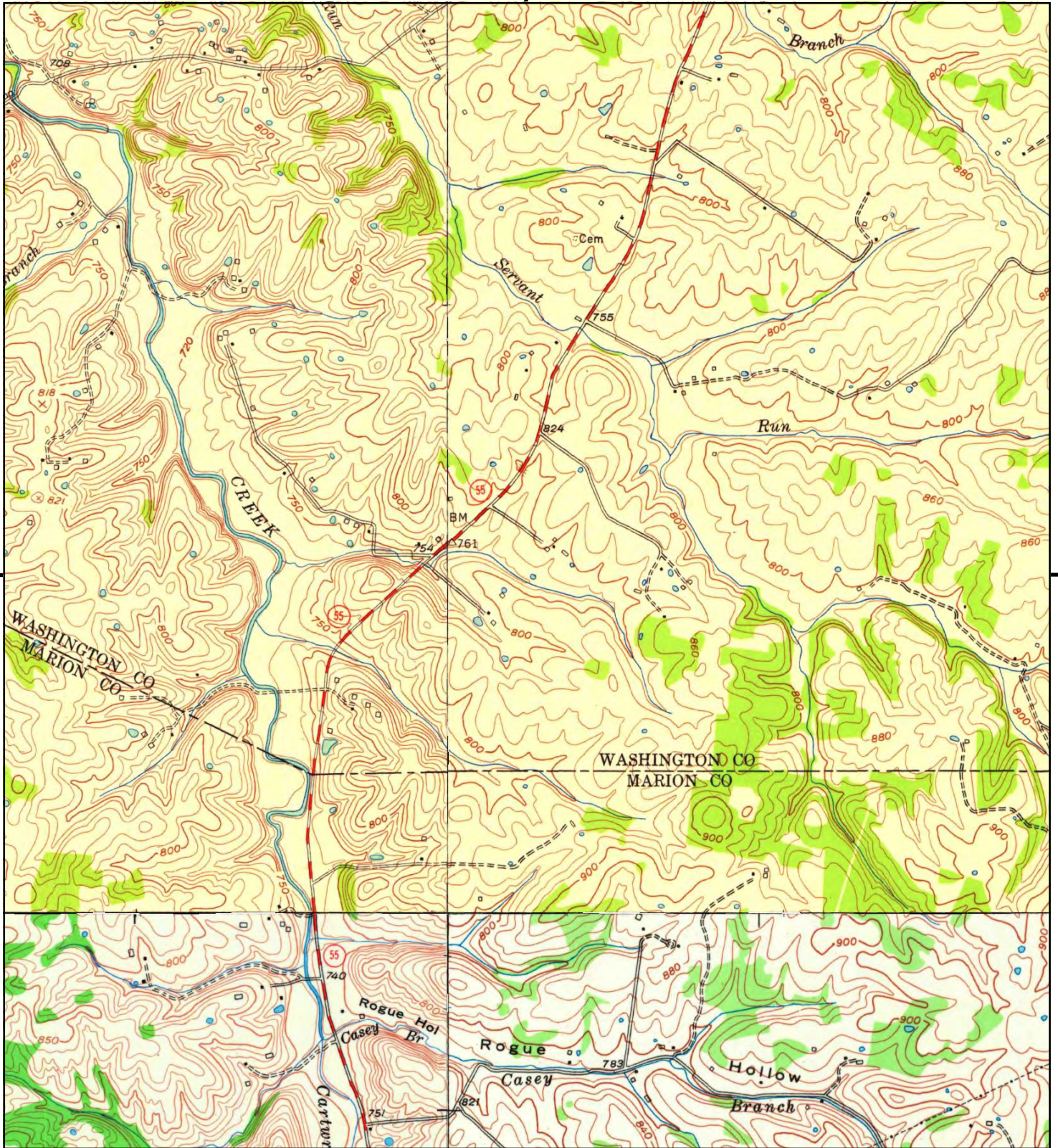
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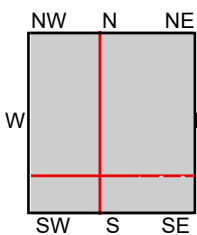
TP, Springfield, 1953, 7.5-minute
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SITE NAME: Northern Bobwhite Phase 1
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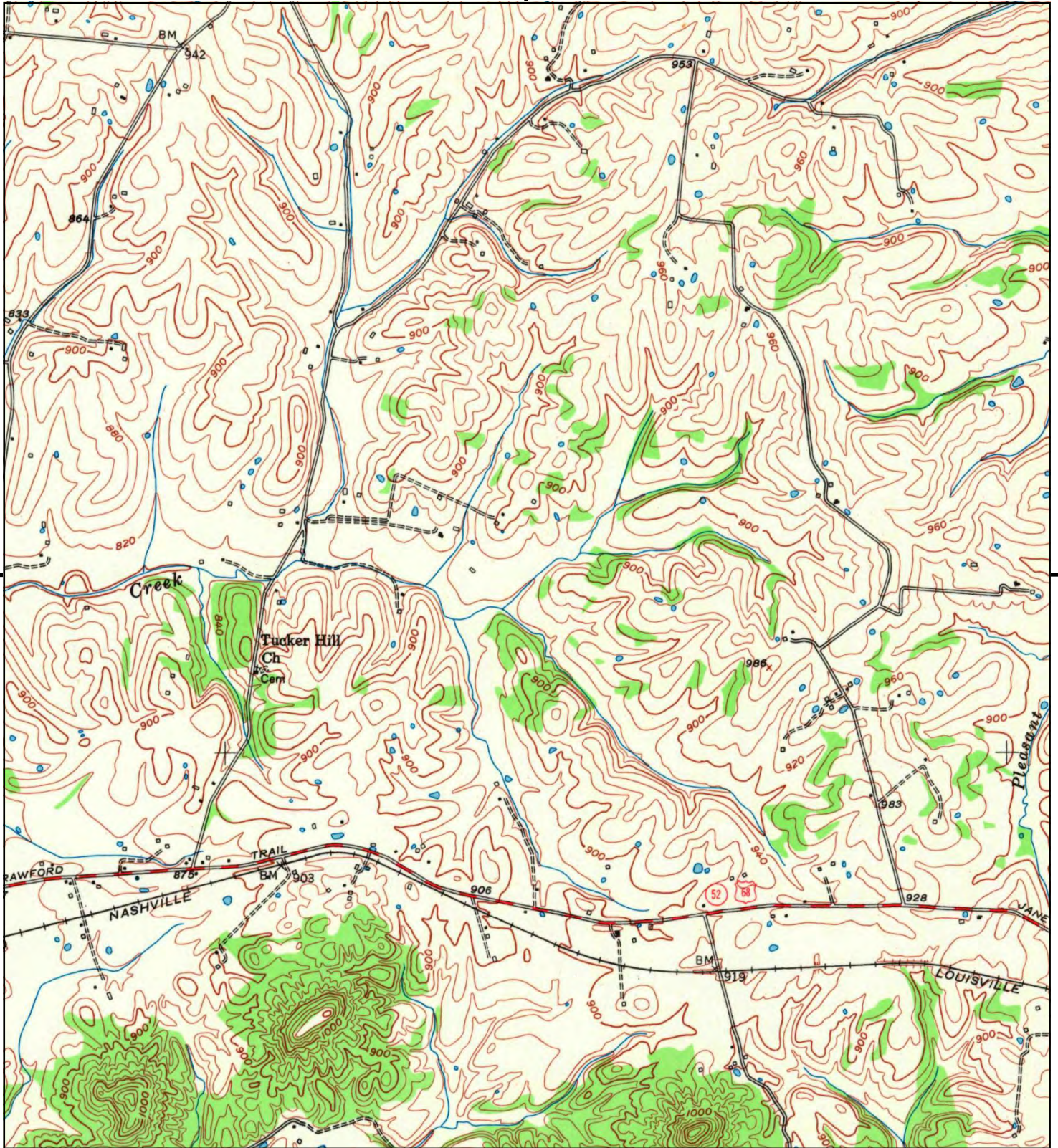
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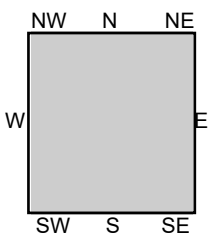
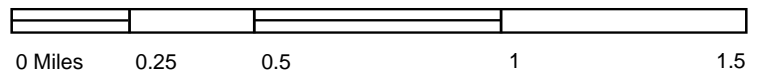
TP, Springfield, 1953, 7.5-minute
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 S, Lebanon West, 1953, 7.5-minute
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This report includes information from the following map sheet(s).



TP, Lebanon East, 1953, 7.5-minute

SITE NAME: Northern Bobwhite Phase 1
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Northern Bobwhite Phase 1
Northern Bobwhite Phase 1
Springfield, KY 40069

Inquiry Number: 7566597.2
February 12, 2024

Certified Sanborn® Map Report



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

02/12/24

Site Name:

Northern Bobwhite Phase 1
Northern Bobwhite Phase 1
Springfield, KY 40069
EDR Inquiry # 7566597.2

Client Name:

Stantec
10509 Timberwood Circle Suite 100
Louisville, KY 40223-0000
Contact: Lucas Downs



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Project NA



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Certification #: 6C59-4DEE-995F

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Northern Bobwhite Phase 1

Northern Bobwhite Phase 1

Springfield, KY 40069

Inquiry Number: 7566597.4

February 13, 2024

The EDR Aerial Photo Decade Package



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Date EDR Searched Historical Sources:

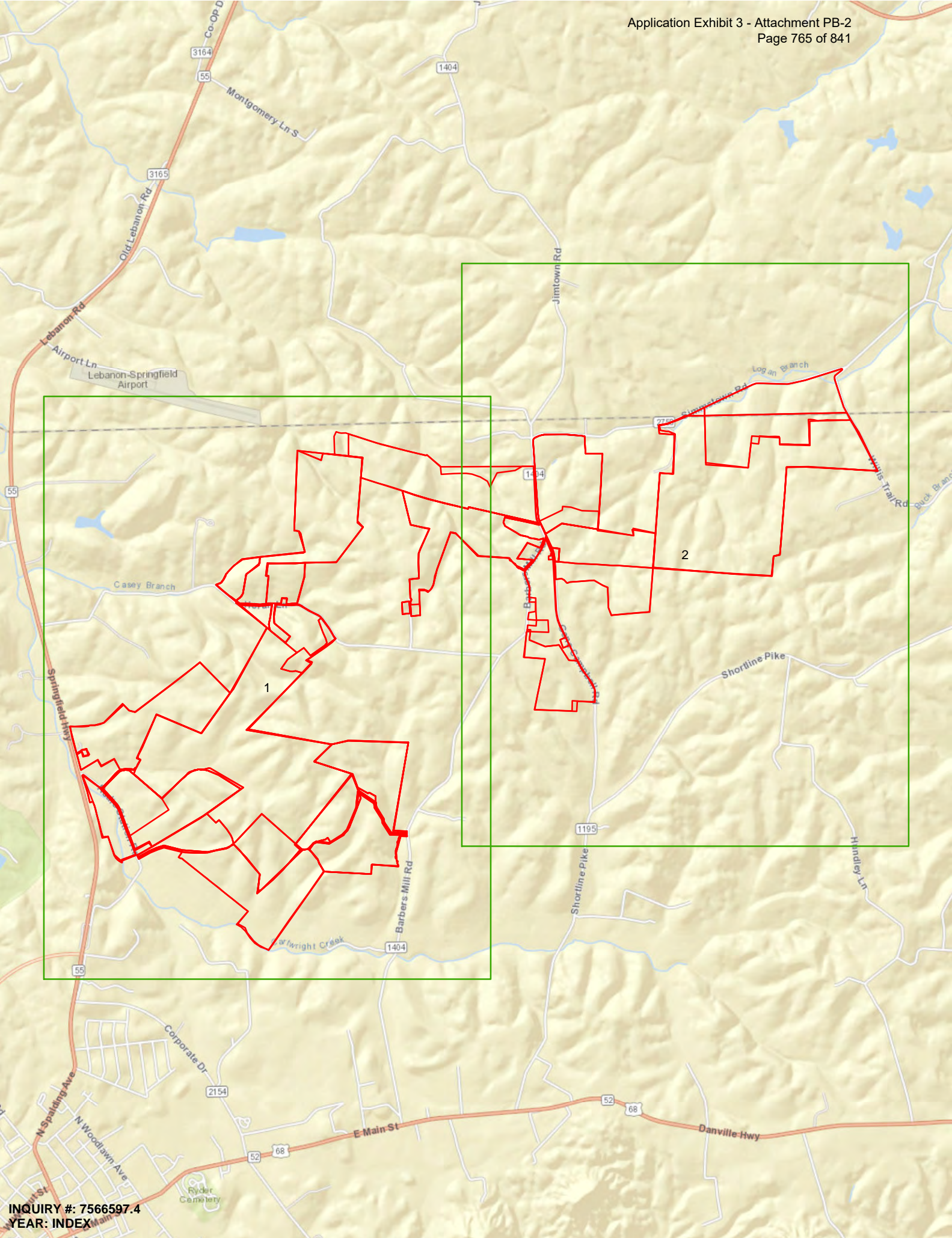
Aerial Photography February 13, 2024

Target Property:

Northern Bobwhite Phase 1

Springfield, KY 40069

<u><i>Year</i></u>	<u><i>Scale</i></u>	<u><i>Details</i></u>	<u><i>Source</i></u>
1951	Aerial Photograph. Scale: 1"=1500'	Flight Year: 1951	USGS
1972	Aerial Photograph. Scale: 1"=1500'	Flight Year: 1972	USGS
1985	Aerial Photograph. Scale: 1"=1500'	Flight Year: 1985	USDA
1997-1998	Aerial Photograph. Scale: 1"=1500'	Flight Year: 1997-1998	USGS/DOQQ
2008	Aerial Photograph. Scale: 1"=1500'	Flight Year: 2008	USGS/NAIP
2012	Aerial Photograph. Scale: 1"=1500'	Flight Year: 2012	USGS/NAIP
2016	Aerial Photograph. Scale: 1"=1500'	Flight Year: 2016	USGS/NAIP
2020	Aerial Photograph. Scale: 1"=1500'	Flight Year: 2020	USGS/NAIP





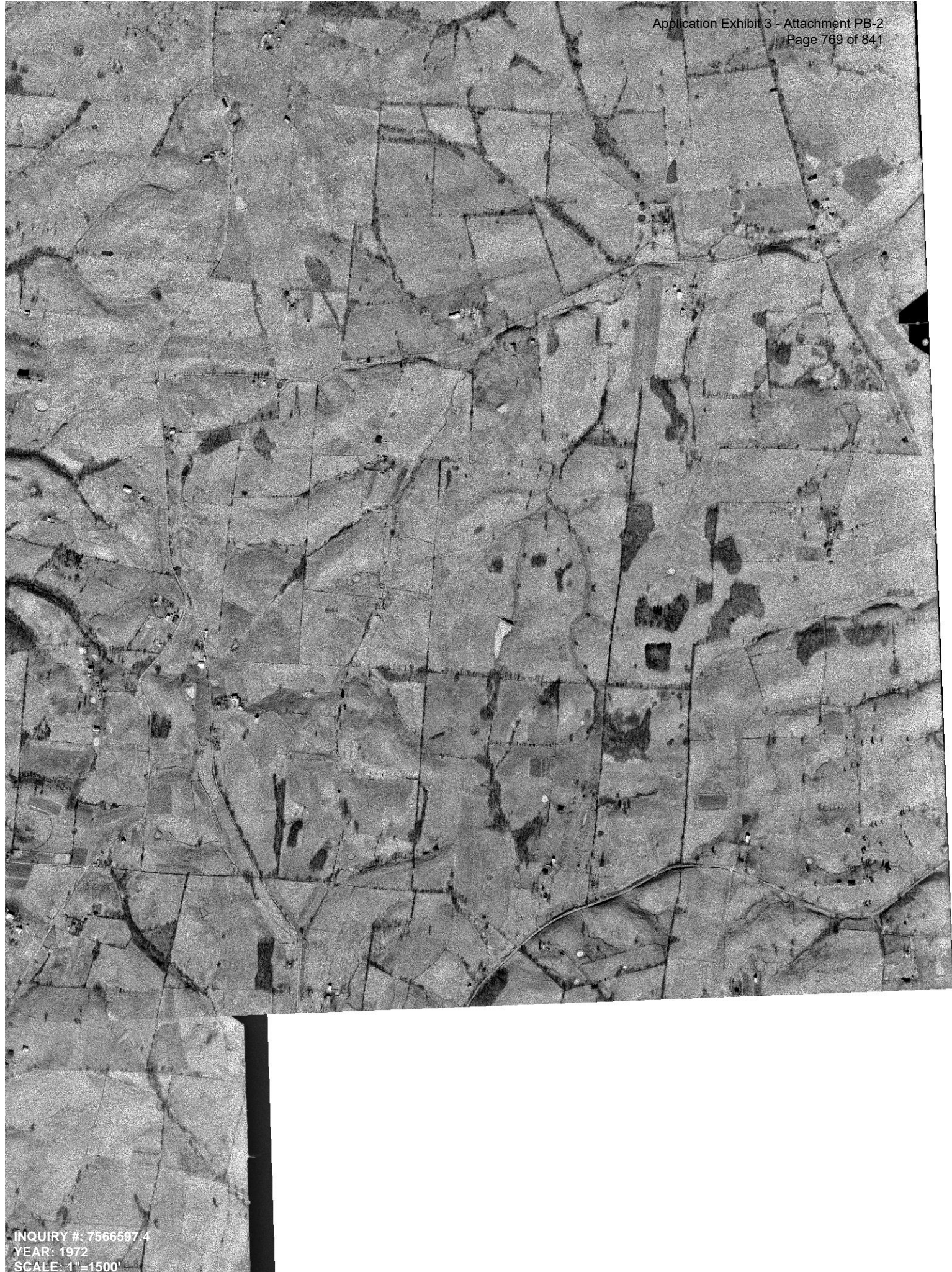


INQUIRY # 7566574
YEAR: 1951
SCALE: 1"=1500'

2-106

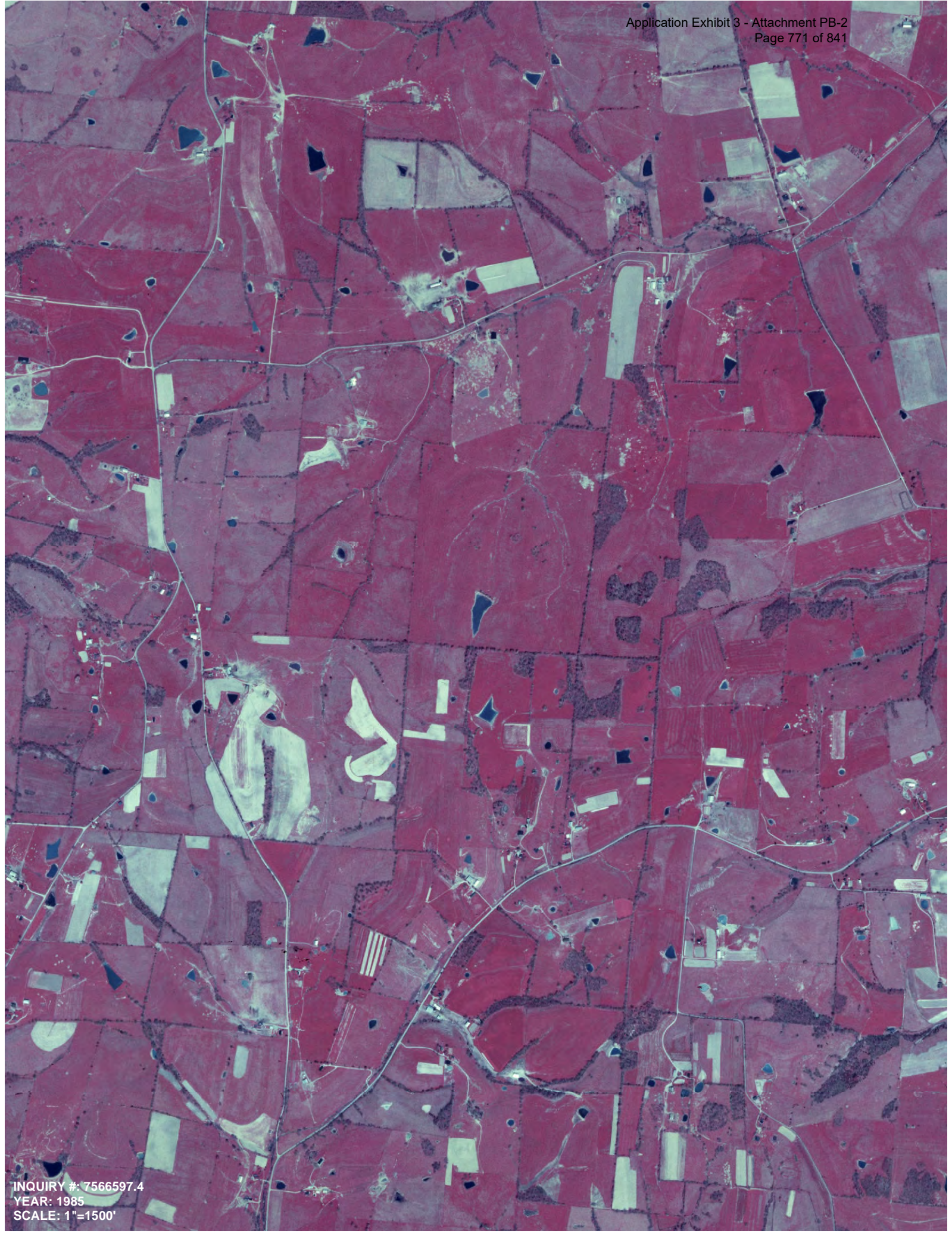
GS-V





INQUIRY #: 7566597.4
YEAR: 1972
SCALE: 1"=1500'







INQUIRY #: 7566597.4
YEAR: 1997-1998
SCALE: 1" = 1500'









INQUIRY #: 7566597.4
YEAR: 2012
SCALE: 1" = 1500'











Northern Bobwhite Phase 1

Northern Bobwhite Phase 1
Springfield, KY 40069

Inquiry Number: 7566597.5
February 14, 2024

The EDR-City Directory Image Report

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Executive Summary

Findings

City Directory Images

Thank you for your business.

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with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available business directory data at approximately five year intervals.

RECORD SOURCES

The EDR City Directory Report accesses a variety of business directory sources, including Haines, InfoUSA, Polk, Cole, Bresser, and Stewart. Listings marked as EDR Digital Archive access Cole and InfoUSA records. The various directory sources enhance and complement each other to provide a more thorough and accurate report.

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RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

<u>Year</u>	<u>Target Street</u>	<u>Cross Street</u>	<u>Source</u>
2020	<input type="checkbox"/>	<input checked="" type="checkbox"/>	EDR Digital Archive
2017	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Cole Information
2014	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Cole Information
2010	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Cole Information
2005	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Cole Information
2000	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Cole Information
1995	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Cole Information
1992	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Cole Information

FINDINGS

TARGET PROPERTY STREET

Northern Bobwhite Phase 1
Springfield, KY 40069

No Addresses Found

FINDINGS

CROSS STREETS

<u>Year</u>	<u>CD Image</u>	<u>Source</u>
-------------	-----------------	---------------

BARBERS MILL RD

2020	pg. A2	EDR Digital Archive	
2017	pg. A7	Cole Information	
2014	pg. A10	Cole Information	
2010	pg. A13	Cole Information	
2005	pg. A16	Cole Information	
2000	pg. A19	Cole Information	
1995	pg. A22	Cole Information	
1992	-	Cole Information	Target and Adjoining not listed in Source

HORAN LN

2020	pg. A4	EDR Digital Archive
2017	pg. A8	Cole Information
2014	pg. A11	Cole Information
2010	pg. A14	Cole Information
2005	pg. A17	Cole Information
2000	pg. A20	Cole Information

HORAN RD

1995	pg. A23	Cole Information	
1992	-	Cole Information	Target and Adjoining not listed in Source

SPRINGFIELD RD

2020	pg. A6	EDR Digital Archive
2017	pg. A9	Cole Information
2014	pg. A12	Cole Information
2010	pg. A15	Cole Information
2005	pg. A18	Cole Information
2000	pg. A21	Cole Information

FINDINGS

<u>Year</u>	<u>CD Image</u>	<u>Source</u>
1995	pg. A24	Cole Information

SPRINGFLD RD

1992	pg. A25	Cole Information
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City Directory Images

BARBERS MILL RD 2020

160 CATHY MCCARTY
549 JOSEPH STEWART
890 JOAN BRADSHAW
931 PAMELA SMITH
1013 GARY SCHREINER
LOU SCHREINER
1015 JULIE BRADSHAW
MARY BRADSHAW
1078 LESLIE BRADSHAW
LESLIE DIXON
MATTHEW ODANIEL
1130 KENNETH BARNETT
NICHOLAS BARNETT
TERESA BARNETT
1150 BRIAN ADAMS
JAVEN ADAMS
JERI ADAMS
JERI JOHNSON
1170 KAREN COBB
ROGER COBB
1220 JUANITA BRIAN
KENNETH BRIAN
PAMELA BRIAN
PHILLIP GORLEY
1270 STEPHEN HALL
1285 CLARENCE MULLINS
JENNIFER MULLINS
RUDDY MULLINS
1335 MARTIN MCMICHAEL
1344 AMANDA MAUPIN
MARK SPALDING
PAMELA SPALDING
1386 DANA ABELL
SYDNEY ABELL
1430 HOLLY BUCKMAN
JOHN BUCKMAN
1500 AMANDA BRADSHAW
HANNAH BRADSHAW
LORETTA BRADSHAW
1569 JEREMY BLAIR
MOLLIE BLAIR
MOLLIE SULLIVAN
2007 HANNAH NEWTON
2009 AMANDA LEATHERS
MICHAEL LEATHERS
2080 DENNIS ODANIEL
KIM ODANIEL
2235 FRANCES REISINGER
JOHN REISINGER
PAIGE MATTINGLY

BARBERS MILL RD 2020 (Cont'd)

2355 MARY TATUM
 SAMUEL TATUM
 2425 MAURICE TATUM
 2590 BUSTER SHUCK
 JULIE SMOTHERS
 2626 GLENDA MATTINGLY
 2640 JESSIE RITCHEY
 STEVEN BAGWELL
 2737 MARIAN JACOBS
 MASON WILSON
 2740 CHRISTOPHER COOK
 2769 DANA HAMILTON
 MARY HAMILTON
 2793 KIM GOOTEE
 2825 NICHOLAS ERCHAK
 TERI ERCHAK
 2860 AMANDA FOLLOWELL
 KENNETH FOLLOWELL
 2879 NICOLE HUFF
 NICOLE SINGLETON
 PHILLIP HUFF
 2899 MARY TUCKER
 SCOTT WOOD
 TERRI TUNGATE
 THERESA TUCKER
 2925 CAM FIELDS
 2960 BECKY GREENWELL
 3115 JAMES HILL
 3225 DONNA BECKLEY
 3237 CRYSTAL WRIGHT
 JUDY KEELING
 3325 DOUGLAS ABELL
 JOAN ABELL
 SCOTT ABELL
 3415 ALICE CLARK
 ANDREW CLARK

HORAN LN 2020

80	CONNIE WHEATLEY
	HERMAN WHEATLEY
120	MARGARET TUCKER
280	BARBARA ZINK
	JESSICA ZINK
	PHILIP ZINK
295	FRANCIS ABELL
530	RADHIKA CLARK
	SONIA CLARK
	SPENCER CLARK
611	BOBBY MURPHY
	DIANA ABELL
	FRANCIS ABELL
	LINDSAY ABELL
850	JESSICA ABELL
	ROGER ROUTION
	STEWART LINNA
1000	ROBERT LUDECKER
1070	CLARENCE MURPHY
	MELISSA MURPHY
	MELISSA RODGERS
1331	DAVE COLEMAN
1335	ALLISON ROBBINS
	BRANDON ROBBINS
1414	DAVID BROWN
1495	LEE GRIBBINS
1500	ALICE BROWN
	SYLVESTER BROWN
1660	DAVID DEDMAN
	MARY CHESSER
	SHARON CHESSER
	TRAVIS CHESSER
1780	STEVE DEERING
	WILLIAM DEERING
1930	PHYLLIS FOURNIER
1944	DAVID MATTINGLY
2230	ELIZABETH MUDD
	ROBERT MUDD
2280	DARRELL GORDON
	KEITH GORDON
2340	JOHN VANDERVEER
2430	CHRISTOPHER HATCHETT
	CLIFTON SHEWMAKER
	HANNAH SHEWMAKER
2450	DEBORAH KUHN
	ROBERT KUHN
2480	DANA RICHARDSON
	JONATHAN SETTLES
2499	GERI WHEATLEY
	LANCE TATUM

HORAN LN 2020 (Cont'd)

2499	MELISSA TATUM
2505	JASON WADE
	JOSEPH WISE
	TARA TATUM
	TARA WISE
	TATUM WISE
2520	JOSEPH COUCH
	LAURA COUCH
2540	JENNIFER SPALDING
	JODY SPALDING
2590	JAN BRADY
	PHILLIP BRADY
	WALLY BRADY
2630	JULIE COWGILL
	MARY HAHN

SPRINGFIELD RD 2020

3405 TERRY TUCKER
3520 KIMBERLY SAGRACY
3530 ALLEN TUNGATE
3770 CASEY MATTINGLY
DEREK MATTINGLY
KENDALL MATTINGLY
LOGAN MATTINGLY
STEPHEN MATTINGLY
TAMMIE MATTINGLY
3780 FRANCIS NALLY
MARK NALLY
STEVEN NALLY
4000 ALICE MATTINGLY
4073 IRVING MATERIALS
4075 JAMES O'HARE
SANDRA O'HARE
4088 LINDA BEAM
PARKER BEAM
7849 ERIC NALLY
ETHAN NALLY
LEO NALLY
MARK NALLY
MELISSA NALLY

BARBERS MILL RD 2017

160	MCCARTY, JIMMY D
890	BRADSHAW, CHARLIE H
950	BRADSHAW, DOROTHY
1013	SCHREINER, LOU A
1015	BRADSHAW, JULIE K
1078	ODANIEL, MATTHEW G
1130	BARNETT, KENNETH E
1150	ADAMS, BRIAN L
1170	COBB, ROGER L
1220	THOMPSON, GLEN A
1270	HUTCHINS, JAY J
1285	MULLINS, RUDDY R
1335	MCMICHAEL, MARTIN A
1344	SPALDING, MARK R
1386	ABELL, THOMAS E
1430	BUCKMAN, JOHN R
1500	BRADSHAW, JAMES R
1569	SULLIVAN, MOLLIE
2080	ODANIEL, DENNIS
2235	MATTINGLY, KYLE D
2425	TATUM, MAURICE
2590	THOMAS, JOHN S
2626	MATTINGLY, JAMES T
2640	TUCKER, JAMES E
2689	BENNINGFIELD, KENNETH D
2737	JACOBS, MARIAN
2740	COOK, CHRISTOPHER A
2793	HAZELWOOD, CURTIS L
2825	ERCHAK, NICHOLAS A
2860	FOLLOWELL, AMANDA L
2879	HUFF, PHILLIP G
2899	TUCKER, ROBERT A
2925	FIELDS, CAM L
2960	GREENWELL, DANIEL P
3115	HILL, JAMES B
3225	BECKLEY, DONNA
3325	ABELL, DOUGLAS S
3415	CLARK, ANDREW C

HORAN LN 2017

80 WHEATLEY, HERMAN
530 CLARK, SPENCER
611 MURPHY, BOBBY L
850 ROUTION, ROGER A
870 MITCHELL, FREDA
1070 MURPHY, CLARENCE W
1330 LANGFORD, VIRGINIA
1335 ROBBINS, BRANDON
1414 BROWN, DAVID A
1495 GRIBBINS, LEE P
1500 BROWN, SYLVESTER R
1660 DEDMAN, DAVID L
1780 DEERING, WILLIAM S
1930 FOURNIER, GILLES
1944 MATTINGLY, DAVID A
2120 HARDIN, VERNON
2230 PURDOM, DAVID L
2280 GORDON, KEITH K
2340 SILLS, MICHAEL L
2430 HATCHETT, CHRISTOPHER C
2450 SCHOLL, GREGORY B
2480 SETTLES, JONATHAN C
2499 TATUM, TERRY T
2505 WISE, JOE D
2520 COUCH, JOSEPH P
2540 SPALDING, JOSEPH
2590 BRADY, PHILLIP W
2630 TRIGG, WILLIAM T

SPRINGFIELD RD 2017

3405 TUCKER, TERRY P
3770 MATTINGLY, STEPHEN D
3780 NALLY, STEVEN L
4088 BEAM, PARKER

BARBERS MILL RD 2014

15	BRADSHAW, RICKY
160	MCCARTY, JIMMY D
665	HUMBLE, OMRY
890	BRADSHAW, CHARLIE H
931	HARDIN, BRAD
950	BRADSHAW, DOROTHY
1013	SCHREINER, LOU A
1015	BRADSHAW, JULIE K
1078	DIXON, TIM
1130	BARNETT, KENNETH E
1150	JOHNSON, JERI K
1170	COBB, ROGER L
1220	THOMPSON, GLEN A
1270	HUTCHINS, JAY A
1285	HUTCHINS, JAY
1335	OCCUPANT UNKNOWN,
1344	SPALDING, MARK R
1386	ABELL, THOMAS E
1430	BUCKMAN, JOHN R
1500	BRADSHAW, JAMES R
1569	BLAIR, JEREMY J
1685	OCCUPANT UNKNOWN,
2080	ODANIEL, KIM
2235	MATTINGLY, KYLE D
2355	TATUM, TERRY T
2425	TATUM, MAURICE
2480	OCCUPANT UNKNOWN,
2590	OCCUPANT UNKNOWN,
2626	MATTINGLY, JAMES T
2640	TUCKER, KRISTY
2689	OCCUPANT UNKNOWN,
2700	OCCUPANT UNKNOWN,
2737	OCCUPANT UNKNOWN,
2740	COOK, CHRIS E
2793	GOOTEE, KIMBERLY A
2825	ERCHAK, NICHOLAS A
2860	FOLLOWELL, KENNETH M
2879	SINGLETON, NICOLE M
2899	TUCKER, ROBERT A
2925	FIELDS, CAM L
2960	GREENWELL, DANIEL P
3115	CURTSINGER, MARIAN L
3145	OCCUPANT UNKNOWN,
3325	ABELL, DOUGLAS S
3415	CLARK, ANDREW C
3585	GRUBBS, BILLY S

HORAN LN 2014

80 WHEATLEY, CONNIE S
120 TUCKER, JAMES A
280 ZINK, PHILIP H
295 OCCUPANT UNKNOWN,
530 SOLANKI, ATUL
611 ABELL, FRANK G
850 ROUTION, ROGER A
1000 ROUTION, JAMES L
1070 MURPHY, CLARENCE W
1330 VILLELOBAS, JENNIFER R
1335 OCCUPANT UNKNOWN,
1414 OCCUPANT UNKNOWN,
1495 OCCUPANT UNKNOWN,
1500 BROWN, SYLVESTER R
1660 DEDMAN, DAVID L
1780 DEERING, WILLIAM S
1930 SMITH, RONALD
2120 RALEY, JAMES O
2230 PURDOM, DAVID L
2280 GORDON, KEITH
2340 VANDERVEER, JOHN L
2370 HAYASHI, HIDENORI
2430 MCILVOY, SHAWN T
2450 OCCUPANT UNKNOWN,
2480 RICHARDSON, STEVEN
2499 WHEATLEY, GERI L
2505 WISE, JOE D
2520 COUCH, JOSEPH P
2540 SPALDING, JODY D
2590 BRADY, PHILLIP W
2630 FOLLOWELL, STEVEN

SPRINGFIELD RD 2014

3405 TUCKER, TERRY P
3530 HENRY, EVA F
3770 MATTINGLY, KENDALL
3780 NALLY, MARK R
4000 MATTINGLY, ALICE M
4088 BEAM, PARKER
4091 WEST, GREGORY A
7849 NALLY, MARK A

BARBERS MILL RD 2010

15	BRADSHAW, RICKY
160	MCCARTY, JIMMY D
665	HUMBLE, OMRY
890	OCCUPANT UNKNOWN,
950	BRADSHAW, JAMES H
1013	OCCUPANT UNKNOWN,
1015	BRADSHAW, JULIE K
1078	DIXON, LESLIE B
1130	BARNETT, KENNETH E
1150	JOHNSON, JOSEPH G
1170	COBB, ROGER L
1220	THOMPSON, GLEN A
1285	MULLINS, RUDDY R
1335	OCCUPANT UNKNOWN,
1344	SPALDING, MARK R
1386	ABELL, THOMAS E
1430	OCCUPANT UNKNOWN,
1500	BRADSHAW CONSTRUCTION CO BRADSHAW, RICKY R
1569	BLAIR, JEREMY
1685	OCCUPANT UNKNOWN,
2080	MOORE, CHARLOTTE C
2425	TATUM, MAURICE
2480	OCCUPANT UNKNOWN,
2590	SHUCK, TONY W
2626	SIMMONS, CHRIS A
2640	RITCHEY, DANNY
2689	BENNINGFIELD, LISA R
2700	OCCUPANT UNKNOWN,
2740	COOK, CHRIS E
2769	HAMILTON, DANA D
2794	GOOTEE, KIMBERLY A
2825	ERCHAK, TERI L
2860	HARDIN, WILLIAM T
2879	SINGLETON, NICOLE M
2899	TUCKER, ROBERT A
2925	FIELDS, CAM L
2960	GREENWELL, DANIEL P
3115	BICKETT, CHRISTOPHER B
3145	OCCUPANT UNKNOWN,
3225	OBRYAN, TAMMY L
3325	ABELL, DOUGLAS S
3415	CLARK, ANDREW C
3585	GRUBBS, BILLY S

HORAN LN 2010

80 WHEATLEY, HERMAN
120 TUCKER, MARGARET A
280 OCCUPANT UNKNOWN,
295 CARR, APRIL
530 CLARK, SPENCER
611 OCCUPANT UNKNOWN,
850 ROUTION, ROGER A
870 PRINCELL, LISA A
872 MITCHELL, STEVEN D
1000 OCCUPANT UNKNOWN,
1070 MURPHY, CLARENCE W
1335 MURPHY, CHAD C
1495 OCCUPANT UNKNOWN,
1500 HALL, ALYSON R
1660 DEDMAN, DAVID L
1780 DEERING, STEVE
1930 SMITH, RONALD
1944 MATTINGLY, DAVID
2120 OCCUPANT UNKNOWN,
2230 CAMPBELL, RODNEY S
2280 GORDON, KEITH K
2340 VANDERVEER, JOHN L
2370 HAYASHI, HIDENORI
2430 MEDLEY, MICHAEL K
2450 CHILDERS, SHEILA M
2480 SETTLES, CHAD
2499 CAMPBELL, MELISSA F
2505 WISE, JOE D
2520 COUCH, JOSEPH P
2540 SPALDING, JAMES T
2590 BRADY, PHILLIP W
2630 MCCROSKY, WILLIAM D

SPRINGFIELD RD 2010

3405 WISER, JOHN R
3530 OCCUPANT UNKNOWN,
3770 MATTINGLY, KENDALL
4000 MATTINGLY, ALICE M
4075 OHARE, JAMES C
4091 OCCUPANT UNKNOWN,
7849 NALLY, MARK A

BARBERS MILL RD 2005

15	BRADSHAW, RICKY
160	MCCARTY, JIMMY D
665	HUMBLE, OMRY
890	BRADSHAW, JOANIE
925	GREENVALLEY FARMS MARY DEAN BRADSHAW
950	BRADSHAW, JAMES H
1015	BRADSHAW, JULIE D
1090	OCCUPANT UNKNOWN,
1130	BARNETT, KENNETH E
1150	OCCUPANT UNKNOWN,
1220	OCCUPANT UNKNOWN,
1285	MULLINS, RUDDY R
1335	OCCUPANT UNKNOWN,
1344	SPALDING, MARK R
1386	ABELL, THOMAS E
1430	BUCKMAN, BRENDAN J
1500	BRADSHAW CONSTRUCTION CO INC OCCUPANT UNKNOWN,
1690	OCCUPANT UNKNOWN,
2235	OCCUPANT UNKNOWN,
2425	TATUM, MAURICE
2590	SHUCK, JULIE
2626	SIMMONS, CHRIS A
2640	RITCHEY, DANNY
2740	DONAHUE, FRANK W
2860	HARDIN, TODD
2899	TUCKER, ROBERT A
2960	HAYDEN, ROBERT
3225	OBRYAN, TAMMY L
3415	CLARK, ANDREW

HORAN LN 2005

80 OCCUPANT UNKNOWN,
120 TUCKER, MARGARET A
280 OCCUPANT UNKNOWN,
295 ABELL, FRANK G
530 CLARK, SPENCER
850 ROUTION, ROGER
870 MITCHELL, FREDA
1000 ROUTION, JAMES
1414 OCCUPANT UNKNOWN,
1495 OCCUPANT UNKNOWN,
1500 BROWN, SYLVESTERR R
1660 DEDMAN, D
1930 MATTINGLY, BJ
2120 HARDIN, VERNON
2280 GORDON, DARRELL K
2340 VANDERVEER, JOHN L
2370 HAYASHI, HIDENORI
2430 BROWNING, BRIAN B
2450 OCCUPANT UNKNOWN,
2480 OCCUPANT UNKNOWN,
2499 TATUM, GERI
2520 COUCH, PAUL
2590 OCCUPANT UNKNOWN,
2630 MCCROSKY, WILLIAM D

SPRINGFIELD RD 2005

3405 KRIES, ROBBIE R
3530 TAYLOR, WANDA
3770 OCCUPANT UNKNOWN,
4000 MATTINGLY, ALICE M
4075 OHARE, TIM R
7849 NALLY, MARK F

BARBERS MILL RD 2000

160 OCCUPANT UNKNOWN,
655 BROWN, DENISE
665 OCCUPANT UNKNOWN,
925 OCCUPANT UNKNOWN,
1015 BRADSHAW, J D
1090 YOUNG, ROSE A
1150 JOHNSON, GARY
1220 THOMPSON, D
1344 OCCUPANT UNKNOWN,
1386 ABELL, THOMAS E
1430 BUCKMAN, JOHN R
1690 MCMICHAEL, PAMELA
2080 MOORE, ROBERT N
2235 SHERVE, MARK
2355 TATUM, TERRY
2425 TATUM, MAURICE
2480 WOODS, BRENDA L
2590 SMOTHERS, JULIE
2591 OCCUPANT UNKNOWN,
2626 SIMMONS, CHRIS
2640 WHEATLEY, G
2700 MEDLEY, FRANCES
2860 HARDIN, TODD
2861 OCCUPANT UNKNOWN,
2960 HAYES, ROBERT A
3325 HARMON, ROBERT E

Target Street

Cross Street

Source

-



Collection Information
Exhibit 3 - Attachment PB-2
Page 807 of 841

HORAN LN 2000

870 CRANE, AMANDA E

SPRINGFIELD RD 2000

1550 JERRY'S AUTO SALES
1720 CLARK, T
1726 GABEHART, GERRI
1930 JONES, CLIFF
1955 COOK JAMES O DVM
COOK, JAMES
2615 CLARK, DAVID
2770 OWEN, GEORGE
3405 KRIES, ROBBIE
4000 MATTINGLY, DAVID J

BARBERS MILL RD 1995

160	MCCARTY, JIMMY D
665	HUMBLE, OMRY
2480	OCCUPANT UNKNOWNN
2590	TATE, ALICE
2860	HARDIN, TODD
2960	HAYES, ROBERT A

HORAN RD 1995

80	WHEATLEY, HERMAN
280	ZINK, PHIL
870	MURPHY, RONALD
2280	TURNER, DALE JR

SPRINGFIELD RD 1995


405 JANE & LINDA SPORTSWEAR
1955 COOK ANIMAL HOSPITAL
COOK, JAMES O
2615 CLARK, DAVID

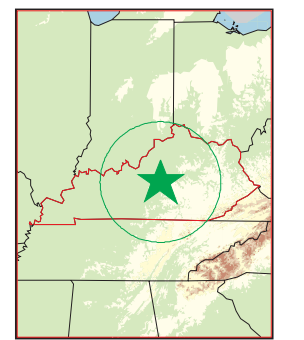
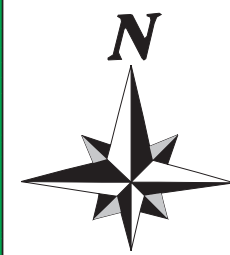
SPRINGFLD RD 1992

14845 BARNETT, BILLY
14865 BARNETT, CHRIS
14955 WEBB, BILLY
15030 WALKER, JOHN W
15085 LLOYD, WILLIAM E
15260 SANDUSKY, SAMUEL L

EDR DataMap® Well Search

Northern Bobwhite Phase 1

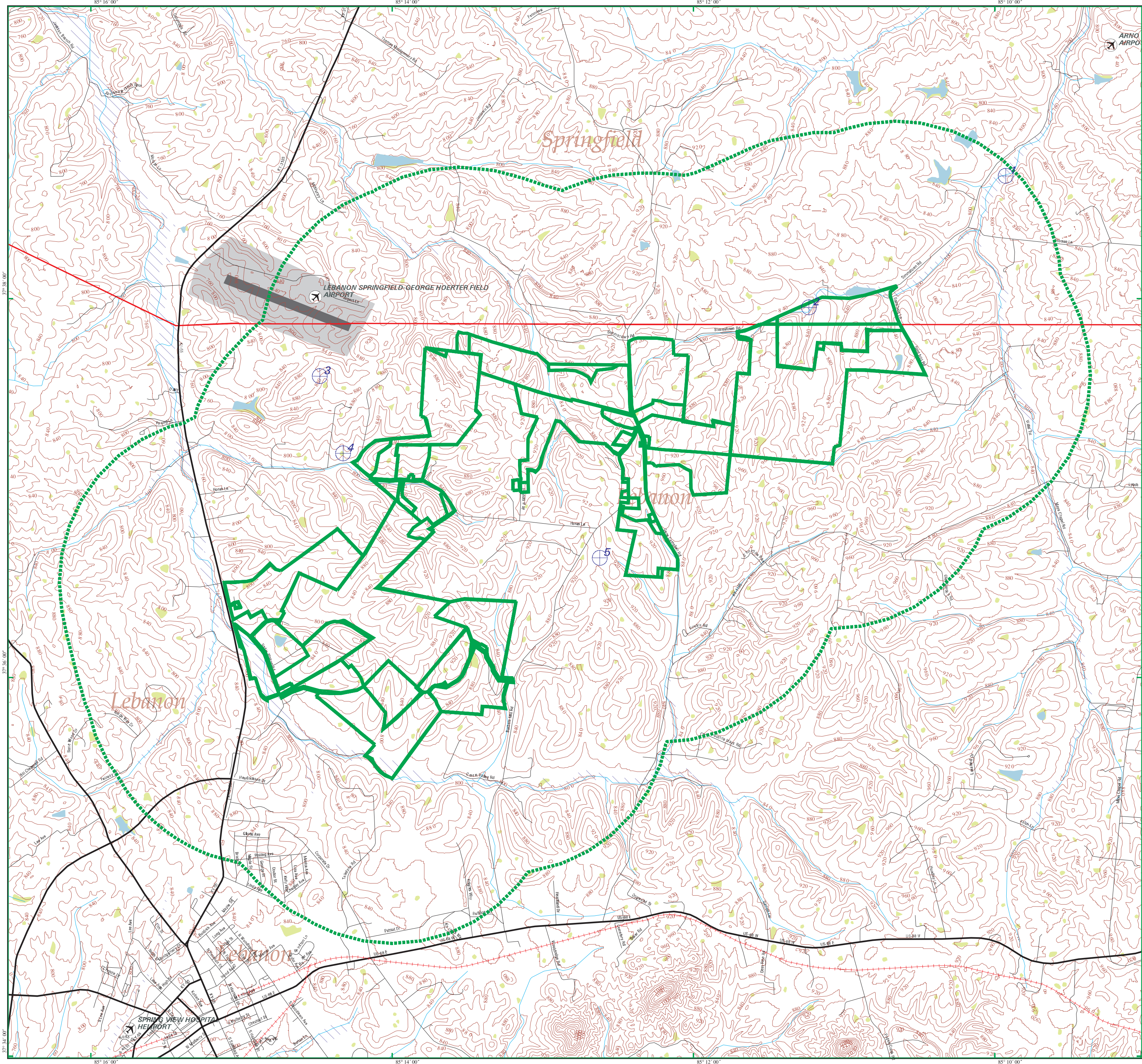
-  Listed Water Wells
-  Study Boundary
-  Roads
-  Major Roads
-  Waterways
-  Railroads
-  Contour Lines
-  Fault Lines
-  Water
-  Superfund Sites
-  100-Yr Flood Zones
-  Wetlands



Springfield, KY



Scale in Miles



Northern Bobwhite Phase 1
Springfield, KY 40069

Inquiry Number: 7566597.8w
February 12, 2024

EDR DataMap™ Well Search Report



Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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GEOCHECK VERSION 2.1 SUMMARY

FEDERAL DATABASE WELL INFORMATION

MAP ID _____ WELL ID _____
NO WELLS FOUND

STATE WATER WELL INFORMATION

MAP ID _____	WELL ID _____
1	KY7000000046471
2	KY700000004995
3	KY7000000049371
4	KY7000000047196
5	KY7000000045286

PUBLIC WATER SUPPLY SYSTEM INFORMATION

NO WELLS FOUND

USGS TOPOGRAPHIC MAP(S)

37085-E2 LEBANON EAST, KY
37085-E3 LEBANON WEST, KY
37085-F2 SPRINGFIELD, KY
37085-F3 SAINT CATHERINE, KY

AREA RADON INFORMATION

Federal Area Radon Information for Zip Code: 40069

Number of sites tested: 1

<u>Area</u>	<u>Average Activity</u>	<u>% <4 pCi/L</u>	<u>% 4-20 pCi/L</u>	<u>% >20 pCi/L</u>
Living Area - 1st Floor	1.500 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	2.900 pCi/L	100%	0%	0%

Federal Area Radon Information for Zip Code: 40033

Number of sites tested: 2

<u>Area</u>	<u>Average Activity</u>	<u>% <4 pCi/L</u>	<u>% 4-20 pCi/L</u>	<u>% >20 pCi/L</u>
Living Area - 1st Floor	1.950 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	0.000 pCi/L	100%	0%	0%

GEOCHECK VERSION 2.1 SUMMARY

AREA RADON INFORMATION

Federal Area Radon Information for Zip Code: 40033

Number of sites tested: 2

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.950 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	0.000 pCi/L	100%	0%	0%

Federal Area Radon Information for Zip Code: 40069

Number of sites tested: 1

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.500 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	2.900 pCi/L	100%	0%	0%

Federal EPA Radon Zone for WASHINGTON County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for WASHINGTON COUNTY, KY

Number of sites tested: 2

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.000 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	2.900 pCi/L	100%	0%	0%

Federal EPA Radon Zone for MARION County: 1

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for MARION COUNTY, KY

Number of sites tested: 3

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.600 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	2.900 pCi/L	100%	0%	0%

GEOCHECK VERSION 2.1 STATE DATABASE WELL INFORMATION

State Well Information:

Map ID:	1	Well Type:	Water Well
AKGWA ID:	30009082	Alt ID:	Not Reported
Well Status:	Not Reported	Well Name:	Not Reported
PWS ID:	Not Reported	Usage:	Domestic - Single Household
Surface Elevation:	0	Depth to Bedrock:	0
Total Depth:	25		
End Date:	Not Reported		

Map ID:	2	Well Type:	Water Well
AKGWA ID:	00004916	Alt ID:	Not Reported
Well Status:	Plugged	Well Name:	Residence - Robert T Hodgen
PWS ID:	Not Reported	Usage:	Agriculture - Livestock Watering
Surface Elevation:	820	Depth to Bedrock:	0
Total Depth:	0		
End Date:	01-JAN-00		

Map ID:	3	Well Type:	Water Well
AKGWA ID:	40003118	Alt ID:	Not Reported
Well Status:	Not Reported	Well Name:	Not Reported
PWS ID:	Not Reported	Usage:	Domestic - Single Household
Surface Elevation:	0	Depth to Bedrock:	0
Total Depth:	0		
End Date:	Not Reported		

Map ID:	4	Well Type:	Water Well
AKGWA ID:	30010632	Alt ID:	Not Reported
Well Status:	Not Reported	Well Name:	Not Reported
PWS ID:	Not Reported	Usage:	Domestic - Single Household
Surface Elevation:	0	Depth to Bedrock:	0
Total Depth:	20		
End Date:	Not Reported		

Map ID:	5	Well Type:	Water Well
AKGWA ID:	30006362	Alt ID:	Not Reported
Well Status:	Not Reported	Well Name:	Not Reported
PWS ID:	Not Reported	Usage:	Domestic - Single Household
Surface Elevation:	0	Depth to Bedrock:	0
Total Depth:	25		
End Date:	Not Reported		

KENTUCKY GOVERNMENT WELL RECORDS SEARCHED**PWS: Public Water Systems**

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

State Wetlands Data: Wetland Inventory

Source: Environmental & Public Protection Cabinet

Telephone: 502-564-6736

Kentucky Water Well Records Database

Source: Kentucky Geological Survey

Telephone: 859-257-5500

Water Wells in Kentucky. Data from the Kentucky Ground Water Data Repository.

Oil and Gas Well Locations

Source: Kentucky Geological Survey

Telephone: 859-257-5500

Oil and gas well locations in the state of Kentucky

STREET AND ADDRESS INFORMATION

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APPENDIX F

AGENCY RECORDS



ANDY BESHEAR
GOVERNOR

REBECCA W. GOODMAN
SECRETARY

**ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION**

TONY HATTON
COMMISSIONER

300 SOWER BOULEVARD
FRANKFORT, KENTUCKY 40601
TELEPHONE: 502-564-2150
TELEFAX: 502-564-4245

January 15, 2020

Mr. Nate Beckman

Environmental Affairs
LG&E and KU
220 West Main Street
Louisville, Kentucky 40202

Re: **NOTICE OF COMPLETION LETTER OPTION C (RESTORATION)**
Closure Report (Report dated February 6, 2019)
Agency Interest Number (AI #): 136520
Louisville Gas and Electric (LG&E) and Kentucky Utilities (KU) Lebanon Substation
NON-PCB Mineral Oil Release
KY-55 and Radio Station Road
Lebanon, Marion County, Kentucky

Dear Mr. Beckman:

The Superfund Branch has reviewed the above-referenced document that was submitted on February 12, 2019 by LG&E and KU. The *Report* documents the remedial actions and confirmation sampling conducted at the above-referenced Site by Early Environmental Contracting, LLC on behalf of LG&E and KU.

A release of approximately 1,670 gallons of NON-PCB mineral oil occurred at KU's Lebanon Substation on March 22, 2018 due to equipment failure. The substation was equipped with secondary containment, and impacted soil was excavated from within the Substation. Additional impacts were later observed in the adjacent bottomland immediately east of Cartwright Creek. Underflow dams, booms, and absorbent pads were deployed to contain the oil, and impacted soil was excavated from the bottomland. Soil confirmation samples were collected approximately every 25 feet following excavation, and several sample results were above the residential remedial soil value for medium distillates.

Multiple applications of a bioaugmentation agent were subsequently completed at the Substation and in the adjacent bottomland in lieu of further excavation at the request of the property owner to address the remaining mineral oil impacts. The final round of confirmation samples collected on January 10, 2019 from the Substation and the adjacent bottomland demonstrated concentrations below the residential remedial soil value at all locations with previous exceedances.

Mr. Nate Beckman
January 15, 2020
AI #136520
Page 2 of 2

The Superfund Branch conducted a Site visit on February 19, 2019 to observe the conditions documented in the *Report*; however, restoration of the Site was not complete at that time. Photo documentation of the completed restoration was submitted to the Superfund Branch by LG&E and KU on January 3, 2020. Restoration included removal of all engineered, erosion, and sediment controls, grade and drainage improvement, and seeding of the disturbed area.

The Superfund Branch has determined that the site is in compliance with KRS 224.01-400(18)(c) and 401 KAR 100:030 Section 8(3)(c) concerning the specific release(s) identified and addressed at the above referenced site. Therefore, no further action is necessary at this time with regards to the above-referenced incident. This determination is based on the information submitted to date. In issuing this Notice of Completion Option C (Restoration), the Division reserves all rights and authority to require additional characterization, assessment of risk, remedial action and/or other actions necessary to protect public health and the environment if the Superfund Branch determines there is a need for additional information or further developments warrant them in accordance with KRS 224.1-405 and 401 KAR 100:030. Nothing in this concurrence shall preclude the Superfund Branch from exercising any administrative, legal and equitable remedies available to require additional response actions in the event that: (1) previously unknown or undetected conditions arise at the Site, or (2) the Superfund Branch receives additional information not previously available that would otherwise impact or affect the Superfund Branch's issuance of this Notice of Completion Option C (Restoration) determination.

The Commonwealth of Kentucky is committed to the protection of human health and the environment, and the safe and productive reuse of sites and properties on which releases have occurred or there is the perceived presence of releases. The Superfund Branch appreciates your efforts to protect human health, safety, and the environment. If you have any questions or comments concerning this determination, please contact the project manager, Kaleigh DeBeck, at (502) 782-0704 or Kaleigh.DeBeck@ky.gov.

Sincerely,



Ken C. Logsdon, P.G.
Petroleum Section Supervisor
Superfund Branch
Division of Waste Management

KCL/kd

ec: Clarence Murphy

APPENDIX G INTERVIEW FORMS

Questions for Environmental Site Assessment

Please answer all and respond N/A if not applicable to the Site.

Who is the current owner of the property? When did the owner purchase the property?

Charles & Paula Brussell 2004

Who is the occupant(s) of the property? Number of years occupied?

Who manages the property? For how long?

Charles Brussell 20 years

Who are the previous owners/tenants of the property? What was the property previously used for?

George Glazebrook Farming

Was the property ever developed with a gas station, automotive repair facility, or industrial facility? If so, please describe and provide dates.

No

Was the property ever used for dry cleaning, film finishing, or x-ray operations? If so, please describe and provide dates.

No

Please provide the year of construction for all buildings and dates of renovations (indicate if known or estimated and source):

None

Please provide the square footage of all buildings on the property (indicate if known or estimated and source):

0

Please provide the acreage of the property (indicate if known or estimated and source):

54 acres

What are the construction materials of the buildings...metal frame, bitumen roof, etc.?

None

Have the building materials been tested for asbestos or lead-based paint? If so, what were the results? Is there a report available?

~~No~~ NA

Have there been reports of mold or water damage at the property? Please describe.

NA

Has fill dirt been used at the property? If so, what was the source of the dirt? Please provide location and reason for fill dirt.

No

Are there any local, state, or federal permits required for the property such as:

Current or historical underground storage tanks (provide tank and line tightness and corrosion protection test results, monthly monitoring reports, tank closure/removal reports)

Storm water discharge

Waste water discharge

Air quality

Hazardous or industrial waste (provide copies of waste manifests and Tier 2 forms for past 3 years)

Spill Prevention Control and Countermeasures (SPCC) Plan?

Please provide copies of all permits.

Do you have any knowledge of prior environmental reports for the property? **Provide Copies**

No

Do you have knowledge of any wells (domestic or monitoring wells), oil water separators, floor drains, or septic tanks on the property? If so, please describe location and use.

No

Do you have knowledge of any current or previous wells, drains, oil water separators, or septic tanks on the property? If so, please describe location and use.

No

Do you have knowledge of any current or historical underground tanks or aboveground storage tanks on the property or adjacent properties?

No

Are you aware of hazardous material or petroleum releases to the property? If so, please provide dates and details.

No

Do you have knowledge of any hazardous materials, petroleum products, or wastes used or stored on the property?

No

Are hazardous wastes generated on the property? If so, please describe and provide waste manifests or method of disposal.

No

How is solid non-hazardous waste stored at or removed from the property?

No

Are you aware of any environmental liens or activity use limitations for the Site or any existing environmental conditions at the property? If so, please describe and provide documentation.

No

Are you aware of any wetlands or ecological easements on the property? If so, please describe.

No

Are you aware of any right-of-ways or underground pipelines on the property? If so, please describe.

No

Name of person completing this questionnaire: Charles Brussell
Title of person completing this questionnaire: Owner
Association with the property: Owner
Years familiar with the property: 20 years

18
23
—
28

Questions for Environmental Site Assessment

Please answer all and respond N/A if not applicable to the Site.

Who is the current owner of the property? When did the owner purchase the property?

Eugene + Cynthia Campbell 1985

Who is the occupant(s) of the property? Number of years occupied?

We are 38

Who manages the property? For how long?

N/A

Who are the previous owners/tenants of the property? What was the property previously used for?

Garland + Ruth Angbee Farming

Was the property ever developed with a gas station, automotive repair facility, or industrial facility? If so, please describe and provide dates.

No

Was the property ever used for dry cleaning, film finishing, or x-ray operations? If so, please describe and provide dates.

No

Please provide the year of construction for all buildings and dates of renovations (indicate if known or estimated and source):

?

Please provide the square footage of all buildings on the property (indicate if known or estimated and source):

N/A

Please provide the acreage of the property (indicate if known or estimated and source):

65 acres

What are the construction materials of the buildings...metal frame, bitumen roof, etc.?

Wood

Have the building materials been tested for asbestos or lead-based paint? If so, what were the results? Is there a report available? *NO*

Have there been reports of mold or water damage at the property? Please describe. *NO*

Has fill dirt been used at the property? If so, what was the source of the dirt? Please provide location and reason for fill dirt. *NO*

Are there any local, state, or federal permits required for the property such as:

Current or historical underground storage tanks (provide tank and line tightness and corrosion protection test results, monthly monitoring reports, tank closure/removal reports) *NO*

Storm water discharge *NO*

Waste water discharge *NO*

Air quality *NO*

Hazardous or industrial waste (provide copies of waste manifests and Tier 2 forms for past 3 years) *NO*

Spill Prevention Control and Countermeasures (SPCC) Plan? *NO*

Please provide copies of all permits.

Do you have any knowledge of prior environmental reports for the property? Provide Copies *NO*

Do you have knowledge of any wells (domestic or monitoring wells), oil water separators, floor drains, or septic tanks on the property? If so, please describe location and use. *NO*

Do you have knowledge of any current or previous wells, drains, oil water separators, or septic tanks on the property? If so, please describe location and use. *NO*

Do you have knowledge of any current or historical underground tanks or aboveground storage tanks on the property or adjacent properties? *NO*

Are you aware of hazardous material or petroleum releases to the property? If so, please provide dates and details. *No*

Do you have knowledge of any hazardous materials, petroleum products, or wastes used or stored on the property? *No*

Are hazardous wastes generated on the property? If so, please describe and provide waste manifests or method of disposal. *No*

How is solid non-hazardous waste stored at or removed from the property? *None*

Are you aware of any environmental liens or activity use limitations for the Site or any existing environmental conditions at the property? If so, please describe and provide documentation. *No*

Are you aware of any wetlands or ecological easements on the property? If so, please describe. *No*

Are you aware of any right-of-ways or underground pipelines on the property? If so, please describe. *No*

Name of person completing this questionnaire: *Engene Caplan*

Title of person completing this questionnaire: *OWNER*

Association with the property: *OWNER*

Years familiar with the property: *70 YRS*

ELAINE MURPHY TRUST

Questions for Environmental Site Assessment

Please answer all and respond N/A if not applicable to the Site.

Who is the current owner of the property? When did the owner purchase the property?

Elaine Murphy Trust is the owner. The farm was put into a trust in approximately 2022, but my family began acquiring the properties in 1960s.

Who is the occupant(s) of the property? Number of years occupied?

Clarence W. Murphy, Jr., my wife and two sons. We have been here for approx. 3 years. I grew up on this farm and spent most of my life here.

Who manages the property? For how long?

Clarence W. Murphy, Jr. since August of 2014.

Who are the previous owners/tenants of the property? What was the property previously used for? My great grand father acquired the first piece of property here. That was passed on to my grandfather and then my father. Shortly after my fathers death my mother created a trust and placed the properties into that. The properties have always been used for agriculture.

Was the property ever developed with a gas station, automotive repair facility, or industrial facility? If so, please describe and provide dates.

No.

Was the property ever used for dry cleaning, film finishing, or x-ray operations? If so, please describe and provide dates.

No.

Please provide the year of construction for all buildings and dates of renovations (indicate if known or estimated and source): 1495 Horan Lane - Tobacco and Stock barn, early 50s. Source: Clarence W. Murphy, Jr., my best guess based on construction.

Please provide the square footage of all buildings on the property (indicate if known or estimated and source): 1495 Horan Lane - Tobacco Barn approx 2000 sq ft, Stock barn is approx 600 sq ft.

Please provide the acreage of the property (indicate if known or estimated and source):

Approx 50 acres.

What are the construction materials of the buildings...metal frame, bitumen roof, etc.?

Tobacco and stock barn are wood side with metal roofs.

Have the building materials been tested for asbestos or lead-based paint? If so, what were the results? Is there a report available?

They have not been tested.

Have there been reports of mold or water damage at the property? Please describe.

No

Has fill dirt been used at the property? If so, what was the source of the dirt? Please provide location and reason for fill dirt.

No.

Are there any local, state, or federal permits required for the property such as: No

Current or historical underground storage tanks (provide tank and line tightness and corrosion protection test results, monthly monitoring reports, tank closure/removal reports)

Storm water discharge

Waste water discharge

Air quality

Hazardous or industrial waste (provide copies of waste manifests and Tier 2 forms for past 3 years)

Spill Prevention Control and Countermeasures (SPCC) Plan?

Please provide copies of all permits. No permits.

Do you have any knowledge of prior environmental reports for the property? **Provide Copies** No

Do you have knowledge of any wells (domestic or monitoring wells), oil water separators, floor drains, or septic tanks on the property? If so, please describe location and use. No

Do you have knowledge of any current or previous wells, drains, oil water separators, or septic tanks on the property? If so, please describe location and use.

No

Do you have knowledge of any current or historical underground tanks or aboveground storage tanks on the property or adjacent properties? No.

Are you aware of hazardous material or petroleum releases to the property? If so, please provide dates and details. No.

Do you have knowledge of any hazardous materials, petroleum products, or wastes used or stored on the property? No.

Are hazardous wastes generated on the property? If so, please describe and provide waste manifests or method of disposal. No.

How is solid non-hazardous waste stored at or removed from the property? No.

Are you aware of any environmental liens or activity use limitations for the Site or any existing environmental conditions at the property? If so, please describe and provide documentation. No.

Are you aware of any wetlands or ecological easements on the property? If so, please describe. No.

Are you aware of any right-of-ways or underground pipelines on the property? If so, please describe. No.

Name of person completing this questionnaire: Clarence W. Murphy, Jr

Title of person completing this questionnaire: Farm Manager & Trustee

Association with the property: Family

Years familiar with the property: 50

MURPHY FAMILY TRUST

Questions for Environmental Site Assessment

Please answer all and respond N/A if not applicable to the Site.

Who is the current owner of the property? When did the owner purchase the property?

Murphy Family Trust is the owner. The farm was put into a trust in approximately 2016, but my family began acquiring the properties in 1943.

Who is the occupant(s) of the property? Number of years occupied?

Clarence W. Murphy, Jr., my wife and two sons. We have been here for approx. 3 years. I grew up on this farm and spent most of my life here.

Who manages the property? For how long?

Clarence W. Murphy, Jr. since August of 2014.

Who are the previous owners/tenants of the property? What was the property previously used for? My great grand father acquired the first piece of property here. That was passed on to my grandfather and then my father. Shortly after my fathers death my mother created a trust and placed the properties into that. The properties have always been used for agriculture.

Was the property ever developed with a gas station, automotive repair facility, or industrial facility? If so, please describe and provide dates.

No.

Was the property ever used for dry cleaning, film finishing, or x-ray operations? If so, please describe and provide dates.

No.

Please provide the year of construction for all buildings and dates of renovations (indicate if known or estimated and source): 535 Radio Station Road - House & Garage early 80s, 925 Radio Station Road - Barn & Garage early 80s. Source: Clarence W. Murphy, Jr., I remember them being built.

Please provide the square footage of all buildings on the property (indicate if known or estimated and source): 535 radio station road - House: approx 3000 sq ft., Garage: approx 800 sq ft. 925 radio station road - Barn: approx. 3600 sq ft, Garage: approx. 500 sq ft

Please provide the acreage of the property (indicate if known or estimated and source):

Approx. 450 +/- acres. Source - Deeds

What are the construction materials of the buildings...metal frame, bitumen roof, etc.?

535 Radio Station Road - House is brick w/asphalt shingle; Garage is a metal building.
925 Radio Station Road - Both barn and garage are metal buildings.

Have the building materials been tested for asbestos or lead-based paint? If so, what were the results? Is there a report available?

They have not been tested.

Have there been reports of mold or water damage at the property? Please describe.

No

Has fill dirt been used at the property? If so, what was the source of the dirt? Please provide location and reason for fill dirt.

No.

Are there any local, state, or federal permits required for the property such as: No

Current or historical underground storage tanks (provide tank and line tightness and corrosion protection test results, monthly monitoring reports, tank closure/removal reports)

Storm water discharge

Waste water discharge

Air quality

Hazardous or industrial waste (provide copies of waste manifests and Tier 2 forms for past 3 years)

Spill Prevention Control and Countermeasures (SPCC) Plan?

Please provide copies of all permits. No permits.

Do you have any knowledge of prior environmental reports for the property? **Provide Copies** No

Do you have knowledge of any wells (domestic or monitoring wells), oil water separators, floor drains, or septic tanks on the property? If so, please describe location and use. The house at 535 has a septic tank in the back. There was a house a 925 located in front of the garage. The house had a septic tank and a domestic use well.

The DUW has not been used in 40 yrs and the septic tank has not been used in 7 yrs
Do you have knowledge of any current or previous wells, drains, oil water separators, or septic tanks on the property? If so, please describe location and use.

See response to previous question.

Do you have knowledge of any current or historical underground tanks or aboveground storage tanks on the property or adjacent properties? No.

Are you aware of hazardous material or petroleum releases to the property? If so, please provide dates and details. No.

Do you have knowledge of any hazardous materials, petroleum products, or wastes used or stored on the property? No.

Are hazardous wastes generated on the property? If so, please describe and provide waste manifests or method of disposal. No.

How is solid non-hazardous waste stored at or removed from the property? No.

Are you aware of any environmental liens or activity use limitations for the Site or any existing environmental conditions at the property? If so, please describe and provide documentation. No.

Are you aware of any wetlands or ecological easements on the property? If so, please describe. No.

Are you aware of any right-of-ways or underground pipelines on the property? If so, please describe. No.

Name of person completing this questionnaire: Clarence W. Murphy, Jr

Title of person completing this questionnaire: Farm Manager & Trustee

Association with the property: Family

Years familiar with the property: 50

1070 Horan Lane

Questions for Environmental Site Assessment

Please answer all and respond N/A if not applicable to the Site.

Who is the current owner of the property? When did the owner purchase the property?

Clarence Jr. & Melissa Murphy are the owners. The farm was put into a trust in approximately 2022, but my family began acquiring the properties in 1960s.

Who is the occupant(s) of the property? Number of years occupied?

Clarence W. Murphy, Jr., my wife and two sons. Lived there from 2000 til 2020. The house, garage and 1.5 acres are currently under contract.

Who manages the property? For how long?

Clarence W. Murphy, Jr. since 2000.

Who are the previous owners/tenants of the property? What was the property previously used for? The previous owner was a Hardin. The property has always been used for residential and agricultural purposes.

Was the property ever developed with a gas station, automotive repair facility, or industrial facility? If so, please describe and provide dates.

No

Was the property ever used for dry cleaning, film finishing, or x-ray operations? If so, please describe and provide dates.

No

Please provide the year of construction for all buildings and dates of renovations (indicate if known or estimated and source): House - 1970s, Garage - approx 2008, Barn - 1950s, Small Stock Barn - 1950s.

Please provide the square footage of all buildings on the property (indicate if known or estimated and source): House approx. 1500 sq ft; Garage approx. 1000 sq ft.; Barn approx 1200 sq ft, Small Stock barn is approx 400 sq ft.

Please provide the acreage of the property (indicate if known or estimated and source):

Approx 13 acres by the deed.

What are the construction materials of the buildings...metal frame, bitumen roof, etc.?

House is brick with asphalt shingles, garage is a metal building, barn and stock barn are wood side with metal roofs.

Have the building materials been tested for asbestos or lead-based paint? If so, what were the results? Is there a report available?

They have not been tested.

Have there been reports of mold or water damage at the property? Please describe.

No

Has fill dirt been used at the property? If so, what was the source of the dirt? Please provide location and reason for fill dirt.

No.

Are there any local, state, or federal permits required for the property such as: No

Current or historical underground storage tanks (provide tank and line tightness and corrosion protection test results, monthly monitoring reports, tank closure/removal reports)

Storm water discharge

Waste water discharge

Air quality

Hazardous or industrial waste (provide copies of waste manifests and Tier 2 forms for past 3 years)

Spill Prevention Control and Countermeasures (SPCC) Plan?

Please provide copies of all permits. No permits.

Do you have any knowledge of prior environmental reports for the property? Provide Copies No

Do you have knowledge of any wells (domestic or monitoring wells), oil water separators, floor drains, or septic tanks on the property? If so, please describe location and use. No

Do you have knowledge of any current or previous wells, drains, oil water separators, or septic tanks on the property? If so, please describe location and use.

No

Do you have knowledge of any current or historical underground tanks or aboveground storage tanks on the property or adjacent properties? No.

Are you aware of hazardous material or petroleum releases to the property? If so, please provide dates and details. No.

Do you have knowledge of any hazardous materials, petroleum products, or wastes used or stored on the property? No.

Are hazardous wastes generated on the property? If so, please describe and provide waste manifests or method of disposal. No.

How is solid non-hazardous waste stored at or removed from the property? No.

Are you aware of any environmental liens or activity use limitations for the Site or any existing environmental conditions at the property? If so, please describe and provide documentation. No.

Are you aware of any wetlands or ecological easements on the property? If so, please describe. No.

Are you aware of any right-of-ways or underground pipelines on the property? If so, please describe. No.

Name of person completing this questionnaire: Clarence W. Murphy, Jr

Title of person completing this questionnaire: Owner

Association with the property: Owner

Years familiar with the property: 24

Questions for Environmental Site Assessment

Please answer all and respond N/A if not applicable to the Site.

Who is the current owner of the property? When did the owner purchase the property?

James W. & Aileen B. Thompson 2008

Who is the occupant(s) of the property? Number of years occupied?

No dwelling on the property

Who manages the property? For how long?

James W. Thompson

Who are the previous owners/tenants of the property? What was the property previously used for?

*McMichael's
Used as a dairy farm*

Was the property ever developed with a gas station, automotive repair facility, or industrial facility? If so, please describe and provide dates.

No

Was the property ever used for dry cleaning, film finishing, or x-ray operations? If so, please describe and provide dates.

No

Please provide the year of construction for all buildings and dates of renovations (indicate if known or estimated and source):

*Metal Bldg. - 2009 Calf Feeder Shed 2018
Hay Shed - 2012
Hoop Barn - 2014*

Please provide the square footage of all buildings on the property (indicate if known or estimated and source):

*Metal Bldg. - 2700 Hoop Barn - 3000
Hay shed # 2/60 Calf Feeder Shed - 1080*

Please provide the acreage of the property (indicate if known or estimated and source):

65 acres

What are the construction materials of the buildings...metal frame, bitumen roof, etc.?

Wood & Metal

Have the building materials been tested for asbestos or lead-based paint? If so, what were the results? Is there a report available?

No. No reason to do that.

Have there been reports of mold or water damage at the property? Please describe.

No

Has fill dirt been used at the property? If so, what was the source of the dirt? Please provide location and reason for fill dirt.

No

Are there any local, state, or federal permits required for the property such as:

Current or historical underground storage tanks (provide tank and line tightness and corrosion protection test results, monthly monitoring reports, tank closure/removal reports)

Storm water discharge

Waste water discharge

Air quality

Hazardous or industrial waste (**provide copies of waste manifests and Tier 2 forms for past 3 years**)

Spill Prevention Control and Countermeasures (SPCC) Plan?

Please provide copies of all permits.

No

Do you have any knowledge of prior environmental reports for the property? **Provide Copies**

No

Do you have knowledge of any wells (domestic or monitoring wells), oil water separators, floor drains, or septic tanks on the property? If so, please describe location and use.

Not in use, located near hay shed from previous owner's mobile home.

Do you have knowledge of any current or previous wells, drains, oil water separators, or septic tanks on the property? If so, please describe location and use.

Same as previous answer.

Do you have knowledge of any current or historical underground tanks or aboveground storage tanks on the property or adjacent properties?

Above ground 150 gallon diesel fuel tank near the metal building for my use on farm.

Are you aware of hazardous material or petroleum releases to the property? If so, please provide dates and details.

No

Do you have knowledge of any hazardous materials, petroleum products, or wastes used or stored on the property?

No

Are hazardous wastes generated on the property? If so, please describe and provide waste manifests or method of disposal.

NO

How is solid non-hazardous waste stored at or removed from the property?

NA

Are you aware of any environmental liens or activity use limitations for the Site or any existing environmental conditions at the property? If so, please describe and provide documentation.

No

Are you aware of any wetlands or ecological easements on the property? If so, please describe.

No

Are you aware of any right-of-ways or underground pipelines on the property? If so, please describe.

No

Name of person completing this questionnaire:

Jimmy Thompson

Title of person completing this questionnaire:

Owner/Manager

Association with the property:

OWNER/MANAGER

Years familiar with the property:

Since 2008