Exhibit E

Noise and Traffic Study

Noise and Traffic Assessment

Logan County Solar

Kentucky State Board on Electric Generation and Transmission Siting Application

Case No. 2021-0128

Logan County, Kentucky
February 4, 2022

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Contents

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Appendices

1 Introduction

1.1 Project Description

A new 173-megawatt solar photovoltaic (PV) facility, known as Logan County Solar (the Project), is proposed to be built in Logan County, Kentucky (Appendix A, Figure 1). If built, the Project would connect to Tennessee Valley Authority's (TVA) adjacent existing Springfield-Logan Aluminum 161-kilovolt transmission line (TL). The proposed solar PV facility would occupy approximately 1,080 acres of a 1,569-acre Project site located approximately 2 miles southwest of the city of Russellville. The solar facility would consist of a solar array proposed to contain crystalline silicon or thin film PV panels attached to ground-mounted single-axis trackers, central inverters, several medium voltage transformers and main power transformers, a substation and battery energy storage system, a switching station, an operations and maintenance building, access roads, and all associated cabling and safety equipment (Appendix B). The placement of the facility components would minimize impacts to environmental resources to the maximum extent possible.

The Project site is within a rural agricultural area and is bounded on the west by Watermelon Road and the RJ Corman Railroad, which roughly parallels U.S. Route 79 (US 79) approximately a quarter mile south of the highway. A.P. Miller Road traverses western and central portions of the Project site, and Joe Montgomery Road traverses eastern portions of the Project site. The Project site is predominantly flat to gently sloping agricultural land with scattered forested areas and some wetlands, streams, ponds, and karst features. Several residences and agricultural buildings are scattered across the Project site.

The Project would consist of PV modules attached to single-axis trackers that follow the path of the sun from the east to the west across the sky. Groups of panels would be connected electrically in series to form strings of panels, with the maximum string size chosen to ensure the maximum inverter input voltage is not exceeded by the string voltage at the Project site's high design temperature. The panels, estimated to be approximately 6.6 feet by 4 feet, would be situated in individual blocks consisting of the PV arrays and an inverter station on a concrete pad or steel piles, to convert the DC electricity generated by the solar panels into AC electricity. The PV panel and inverter blocks in close vicinity and not separated by public roads would be enclosed together by chain-link security fencing.

1.2 Existing Land Use and Site Conditions

The Project site and surrounding area consists of agricultural, forested, and rural-residential land (Appendix A, Figure 2). Consistent with the surrounding area, imagery data collected from the National Land Cover Database (NLCD) show the Project site as primarily cultivated crops with scattered areas of deciduous forest. Table 1 presents the breakdown of land cover type by acres and percentage. Aerial imagery depicts the presence of several farm buildings located at the southwestern portion of the Project site, as well as three small ponds scattered across the site (Appendix A, Figure 3). According to historical aerial imagery and topographic quadrangle maps obtained for a Phase I Environmental Site Assessment completed for the Project site, land use in the Project area has remained relatively unchanged since at least 1950.

Table 1 Land cover types within the Project site

NLCD land cover type	Approximate area (acres)	% of Project site
Cultivated crops	1,375	88
Deciduous forest	123	8
Developed, open space	32	2
Hay/pasture	27	<2
Mixed forest	5	<1
Woody wetlands	4	<1
Developed, low intensity	2	<1
Open water	1	<1
Total	**1,569**	**100**

2 Noise Study

2.1 Existing Noise Conditions

Noise is generally described as unwanted sound, which can be based either on objective effects (hearing loss, damage to structures, etc.) or subjective judgments (such as community annoyance). The human ear does not perceive all sound frequencies equally well. Therefore, measured sound levels are adjusted or weighted to correspond more closely to noise perceived by human hearing. The adjusted noise metric that most closely duplicates human perception of noise is known as the A-weighted decibel (dBA). The threshold of human hearing is 0 decibels (dB), and the threshold of discomfort or pain is around 120 dB.

A day-night average sound (L_{dn}) is a 24-hour noise descriptor used to assess noise impacts for land uses where people sleep and there is a heightened sensitivity to nighttime noise. The L_{dn} noise metric is recommended by USEPA and has been adopted by most federal agencies (USEPA 1974). The dBA is the adjusted noise metric that most closely duplicates the human perception of noise. An L_{dn} of 65 dBA is most commonly used for noise planning purposes, and areas exposed to an L_{dn} above 65 dBA are generally not considered suitable for residential use. An L_{dn} of 55 dBA was identified by USEPA as a level below which there is no adverse impact (USEPA 1974). For reference, approximate noise levels (measured in dBA) of common activities/situations are provided in Table 2.

Table 2 Noise levels of common activities/situations

Activity/Event	dBA
Lowest audible sound to person with average hearing	0
Quiet rural, nighttime	25
Quiet urban, nighttime	45
Large business office	60
Normal speech at 3 feet	70
Noisy urban area, daytime	75
Food blender at 3 feet	90

Activity/Event	dBA
Gas lawn mower at 3 feet	100
Jet flyover at 1000 feet	110

Source: Caltrans 2018

2.1.1 Nearest Receptor Sites

The Project site and a surrounding 0.5-mile radius were examined to identify potential noise-sensitive receptors. Noise-sensitive receptors are defined as those locations or areas where dwelling units or other fixed, developed sites of frequent human use occur. Approximately 113 noise-sensitive receptors are within the area examined (Appendix A, Figure 4). These primarily consist of residences, residential farm complexes, associated outbuildings, and nonresidential agricultural complexes, with each building generally counted as one receptor. Agricultural outbuildings and rural-residential concentrations of noise-sensitive receptors occur around the perimeter of the Project site, ranging from less than 250 feet to approximately 2,640 feet from proposed PV array locations. Residential concentrations are primarily located near the western portion of the Project site, while concentrations of residences and associated outbuildings surround the eastern portion of the Project site.

2.1.2 Existing Noise On-Site and Surrounding Area

Existing noise conditions on and near the Project consist of typical sounds produced from farming and agriculture activities. These noises include trucks, all-terrain vehicles (ATVs), tractors, and other farming equipment used during hay harvesting, bailing operations, as well as feed and animal transportation. The tract is surrounded by several two-lane roadways that receive local traffic typical of a rural residential and farming community. Therefore, automobile traffic is also expected to contribute to noise within the assessment area. Other noises experienced include wildlife present in rural areas (i.e., insects, birds, and frogs) and occasional sounds from passing trains.

Noise levels from typical agricultural activities generally range from 45 to 55 dBA. Noise from highways typically range from 70 to 80 dB at a distance of 50 feet. Noise from freight trains traveling at 20 miles per hour measures around 88 dBA at a distance of 50 feet. Trains using horns must not exceed 110 dB to be in accordance with Federal Railroad Administration requirements.

2.2 Proposed Construction Noise Conditions

2.2.1 Equipment and Machinery

Direct and indirect noise impacts associated with implementation of the Project would primarily occur during construction. Construction equipment produces a range of sounds while operational. Noisy construction equipment, such as delivery trucks, dump trucks, water trucks, service trucks, bulldozers, chain saws, bush hogs, or other large mowers for tree clearing, produce maximum noise levels at 50 feet of approximately 84 to 85 dBA. This type of equipment may be used for approximately 18 months at the Project site. However, most of the proposed equipment would not be operating on site for the entire construction period and would be phased in and out according to the progress of the Project.

Construction noise would cause temporary and minor adverse impacts to the ambient sound environment in the Project area. Several residences and residential and nonresidential agricultural complexes would temporarily experience heightened noise during construction; however, these impacts would be similar to the noise associated with standard agricultural operations. Construction would primarily occur during daylight hours, between sunrise and sunset; therefore, the Project would not affect ambient noise levels at night during most of the construction period.

2.2.2 Roadway Noise During Construction

A temporary increase in traffic is anticipated during the construction phase. The increase in traffic is described in greater detail in Section 3. Based upon noise levels published by the Federal Highway Administration, the noise contributed by construction vehicles, such as cranes, dump trucks, and light passenger cars and trucks would be in short duration and would not occur between 11 PM and 6 AM. The loading and unloading of equipment would occur primarily during daytime hours and would occur several hundred feet inside the property boundary.

2.2.3 Assembly of solar array and construction of facilities

Assembly of the panel tracking system and the installation of the solar panels, inverters, and other electrical equipment associated with the Project would likely employ typical manual hand tools and power tools. These assembly operations would occur several hundred feet to thousands of feet inside the property boundary, would occur during normal business hours on weekdays, and noise generated by power equipment would be short in duration.

2.3 Proposed Operational Noise Conditions

2.3.1 Solar Array and Tracking System

The solar array associated with the Project includes single-axis tracking panels distributed evenly across the site. Tracking systems involve the panels being driven by small, 24-volt brushless DC motors to track the arc of the sun. Moving parts of the solar facility would be restricted to the east-to-west facing tracking motion of the solar modules, which amounts to a movement of less than a 1 degree angle every few minutes. This movement maximizes the collection of solar energy by rotating with the sun and is barely perceptible. The sound typically produced by panel tracking motors (NexTracker or equivalent) is approximately 78 decibels.

2.3.2 Inverters

The central inverters would produce noise levels of approximately 65 dBA at 33 feet, and the Project substation would each emit approximately 50 dBA at 300 feet. As no noise receptors are within 33 feet of the proposed inverter locations or within 300 feet of the Project substation, noise impacts from these Project components are anticipated to be minimal to negligible. Thus, noise impacts from the Project substation are not anticipated. Due to sheep operations on the Project site during the operations and maintenance phase, coupled with the general lack of mowing or use of farm equipment, the Proposed Action would have similar to lower noise levels than are typical on the Project site currently with row crop operations.

2.3.3 Site Operations and Maintenance

The Project substation, which is responsible for converting electrical voltage levels, would emit approximately 50 dBA at 300 feet. Typical maintenance activities on solar facilities include minor repair and maintenance of the solar panels, tracking systems, electrical wiring, or maintenance/inspections of the inverters. The Project also proposes the use of a sheep herd for grounds maintenance. Post-construction, the Project site would be seeded using a mixture of certified weed-free, low-growing native and/or noninvasive grass and herbaceous plant seed containing species that tend to attract pollinators. Contract shepherds would be employed to maintain the herd. If conditions require, soil may be further stabilized by mulch or sprayable fiber mat. Spot herbicide application may also occasionally be applied if necessary and appropriate.

2.4 Noise Summary and Conclusions

Noise during the construction phase is expected to temporarily increase during daylight hours and would be in the form of heavy equipment, passenger cars and trucks, and tool use during assembly of the solar facilities. Noise would be present on the Project site during construction; however, due to the size of the Project and the distance to the nearest receptors, construction would not contribute to a significant noise increase when compared to noise currently occurring on or near the Project (i.e., the operation of farming equipment for livestock, hay production, and crop harvesting).

In addition, periodic noise associated with the solar panel tracking system and the relatively constant noise of inverters would occur during operation. The noise produced by the inverters is 65.0 dBA, which is slightly above that of a typical person-to-person conversation (i.e., 60.0), and would not be a contributor of noise to the nearest receptor (i.e., single-family home). Site visits and maintenance activities would take place during daylight hours and will not significantly contribute to noise. The noise associated with these activities is very similar to those currently generated onsite by farming activities and offsite by commercial and farm uses. All construction, operation, and maintenance activities would take place in daylight hours.

3 Traffic Study

3.1 Existing Road Network and Traffic Conditions

The Project site is bounded on the west by Watermelon Road and the RJ Corman Railroad, which roughly parallels US 79 approximately a quarter mile south of the highway (Appendix A, Figure 3). Watermelon Road is a two-lane paved public road that extends north-south along the western boundary of the Project site. A.P. Miller Road, a two-lane gravel road traverses east-west through western and central portions of the Project site. A.P. Miller Road provides access to the Project site through its connection with Watermelon Road. Joe Montgomery Road, a two-lane road with paved and gravel portions traverses north-south through eastern portions of the Project site. Joe Montgomery Road provides access to the Project site through its connection with US 79. US 79 in the Project vicinity is a two-lane undivided federal highway that extends northeast-southwest, approximately a quarter mile from the northwestern terminus of the Project site. There are also a few unnamed private dirt roads that extend through the Project site.

Existing traffic volumes on some of the roads in the Project area were determined using 2018 and 2019 Average Annual Daily Traffic (AADT) counts measured at existing Kentucky Transportation Cabinet (KYTC) stations (KYTC 2021). Three KYTC stations (Stations 506, B18, and B60) are located within 1-mile of the Project site. The 2018 AADT count for Station 506, located on Watermelon Road approximately 1-mile southwest of the Project site, was 377 vehicles. The 2018 AADT count for Station B18, located on US 79 approximately 1-mile north of the Project site, was 4,441 vehicles. The 2019 AADT count for Station B60, located on US 431 (Russellville Bypass) approximately 1-mile northeast of the Project site, was 4,380 vehicles.

3.2 Construction Traffic

The construction of the proposed solar facility is expected to take up to 18 months, with approximately 450 workers at the peak. During construction, a temporary increase in traffic volume associated with travel of construction laborers, delivery of construction equipment and material, delivery of solar panel components and equipment is anticipated, primarily along Watermelon Road, US 79, and US 431. Laborer commutes with passenger vehicles and trucks would occur daily with traffic peaks in the morning, at lunch, and at the end of the workday, whereas deliveries of equipment would occur on trailers, flatbeds, or other large vehicles periodically throughout the construction process at various times of day.

3.2.1 Traffic Safety Precautions

Permanent road or lane closures are not anticipated for the construction of the solar facility. However, the presence of signage, signaling, personnel flagging traffic, and temporary lane closures may be employed to reduce risk of collision on the roadway. For instance, the presence of a flag person to temporarily stop traffic to allow for a delivery truck and trailer to safely turn into the site may be necessary at times of equipment deliveries. Appropriate signage of trucks entering the highway or slow-moving vehicles would be used to warn oncoming traffic of potential risk.

3.2.2 Impact on Road Infrastructure

Significant degradation to the existing roadways is not anticipated for the proposed Project. The increase in localized traffic and the continued entry and exit of heavy trucks or equipment has potential to result in additional wear of the existing roadway or shoulder at Project entry points. Damage resulting from Project construction would be rectified.

Access drives and internal roads would be constructed or improved as needed to accommodate appropriate vehicles and equipment to construct the proposed solar facility. Internal roads would be compacted gravel, which may result in an increase in airborne dust particles. During construction, water may be applied to internal road system to reduce fugitive dust.

3.2.3 Operational and Maintenance Traffic

The proposed solar facility would be monitored remotely to identify any security or operational issues. If a problem is discovered during nonworking hours, a local repair crew or law enforcement personnel would be contacted if an immediate response were warranted. Employees would additionally conduct periodic site visits to inspect the area site, ensure proper equipment operation, and note any maintenance needs. Permanent access to the Project

substation and switching station for maintenance and repairs would be within the Project site, via Joe Montgomery Road (Appendix B, Site Plan). Shepherds would be present onsite to tend to the needs of sheep herds. Therefore; maintenance will occur more frequently during the vegetative growing season. Employees would generally contribute less to vehicle traffic than a typical single-family home. Vehicular traffic on the Project site would be limited to typical weekday work hours and would not significantly contribute to additional traffic in the Project vicinity.

3.3 Traffic Summary and Conclusions

Traffic in the Project vicinity is predicted to increase temporarily during the construction phase of the Project. This includes daily morning, midday, and evening peaks for construction laborers entering and exiting the Project site and periodic delivery of construction materials and equipment. Appropriate signage and traffic directing would occur as necessary to increase driver safety and reduce risk of collisions for approaching traffic. There are not anticipated damages to the existing roadway infrastructure. For facility operation and maintenance, there would be no significant increase in traffic.

4 Fugitive Dust Impacts

Land disturbing activities associated with the Project may temporarily contribute to airborne materials. To reduce wind erosion of recently disturbed areas, appropriate revegetation measures, application of water, or covering of spoil piles may occur. In addition, any open-bodied truck transporting dirt will be covered when the vehicle is in motion. Water in sufficient quantity and quality would be made available through the use of onsite groundwater wells or by delivery via water trucks. The size of the Project site, distance to nearby structures and roadways, combined with vegetated buffers along the property boundaries and some slatted fencing would aid in managing off-site dust impacts. Internal roads would be compacted gravel, which may result in an increase in airborne dust particles during dry conditioned and internal road traffic is heavy. During construction activities water may be applied to internal road system to reduce dust generation. Water used for dust control would be authorized under the Kentucky Pollutant Discharge Elimination System (KPDES) as a non-stormwater discharge activity. Similarly, erosion control measures would be maintained until vegetation in the disturbed areas has returned to the preconstruction conditions or the site is stable thereby limiting the amount of dust present post-construction.

5 Railroad Effects

A short-line railroad, RJ Corman Railroad, extends north-south adjacent to the western boundary of the Project site. The proposed Project would have no effect on this railroad, nor would the Project utilize the rail for deliveries.

A

Appendix A – Figures 1-4

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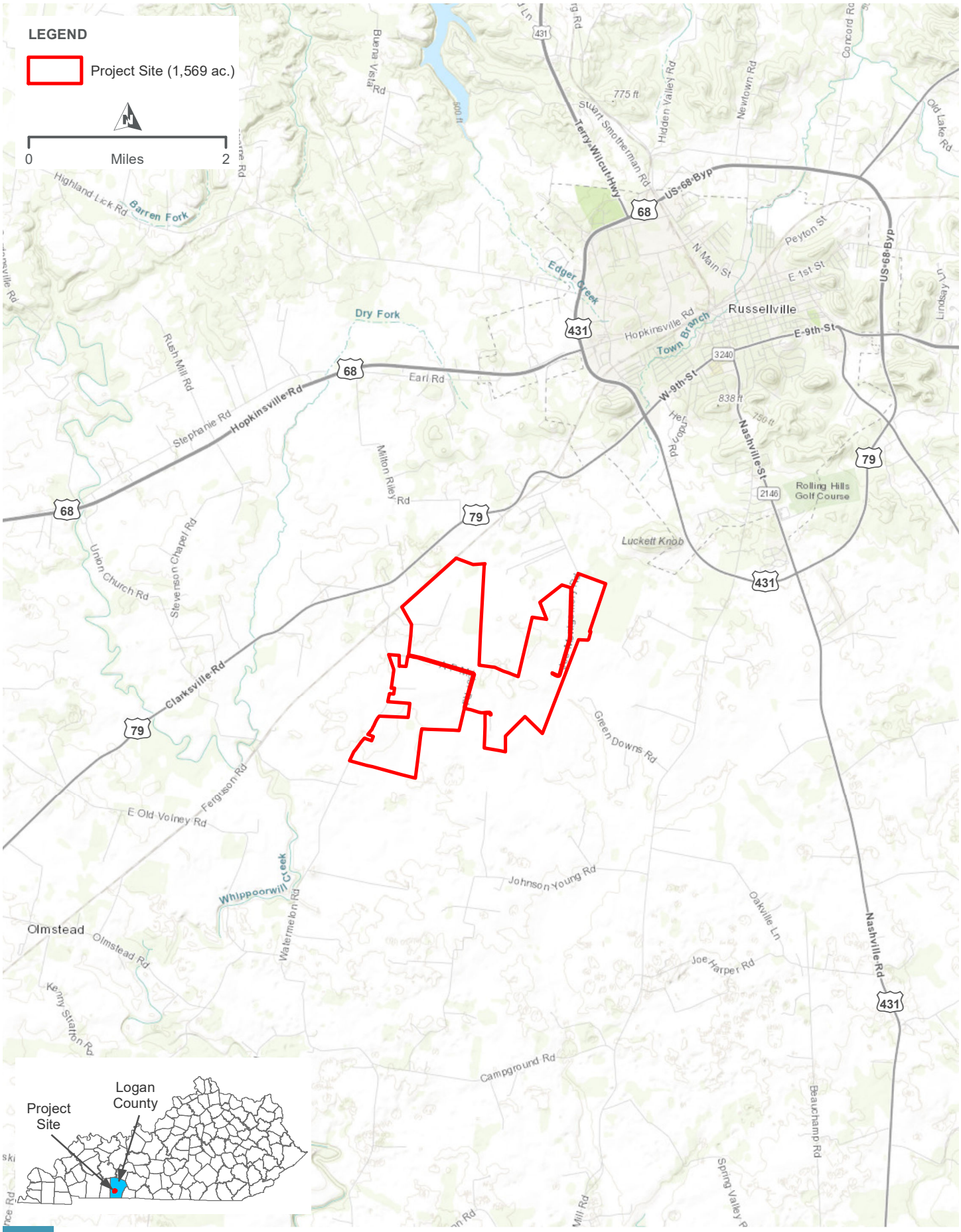
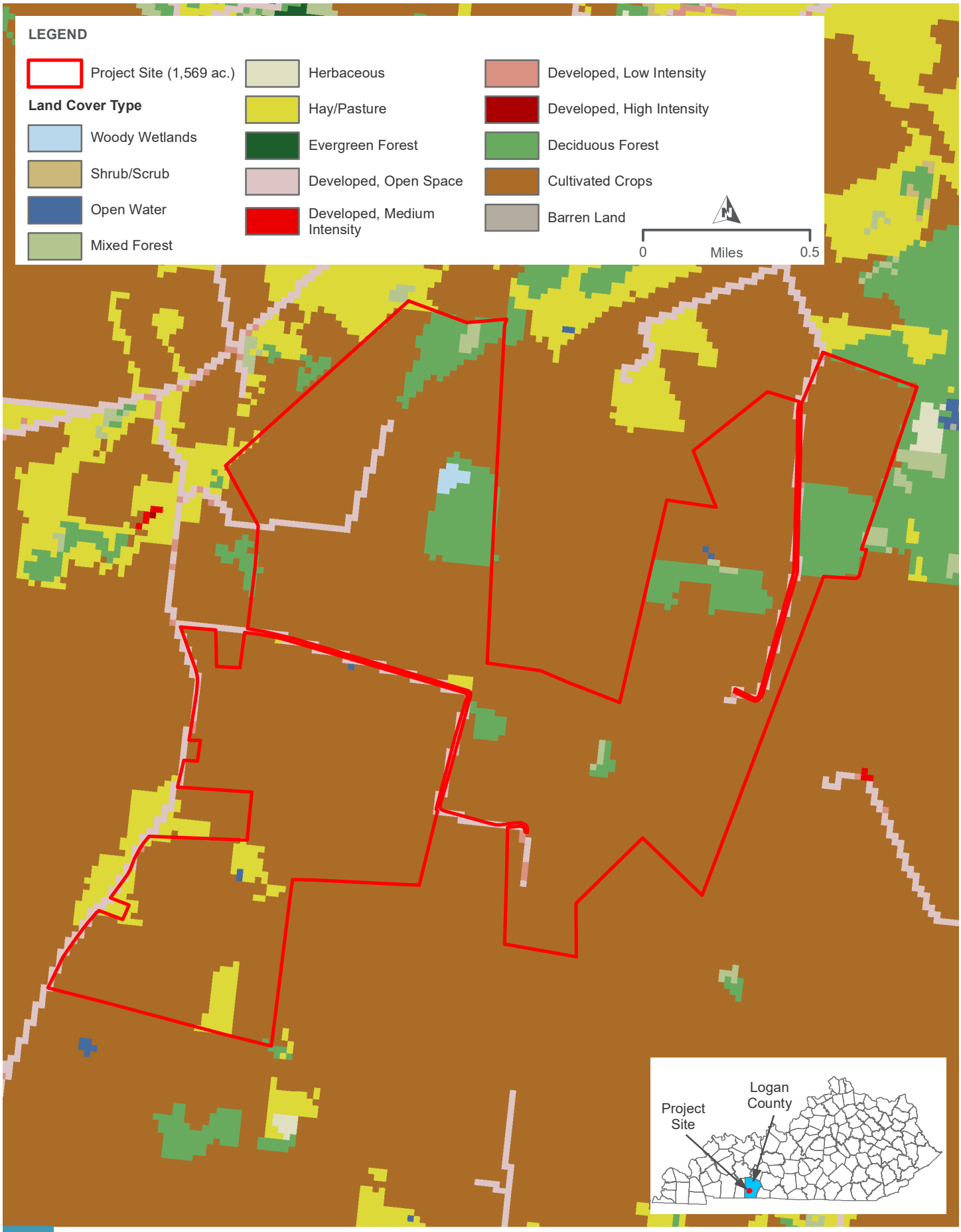


LOGAN COUNTY SOLAR

PROJECT LOCATION MAP

FIGURE 1

NOISE AND TRAFFIC ASSESSMENT

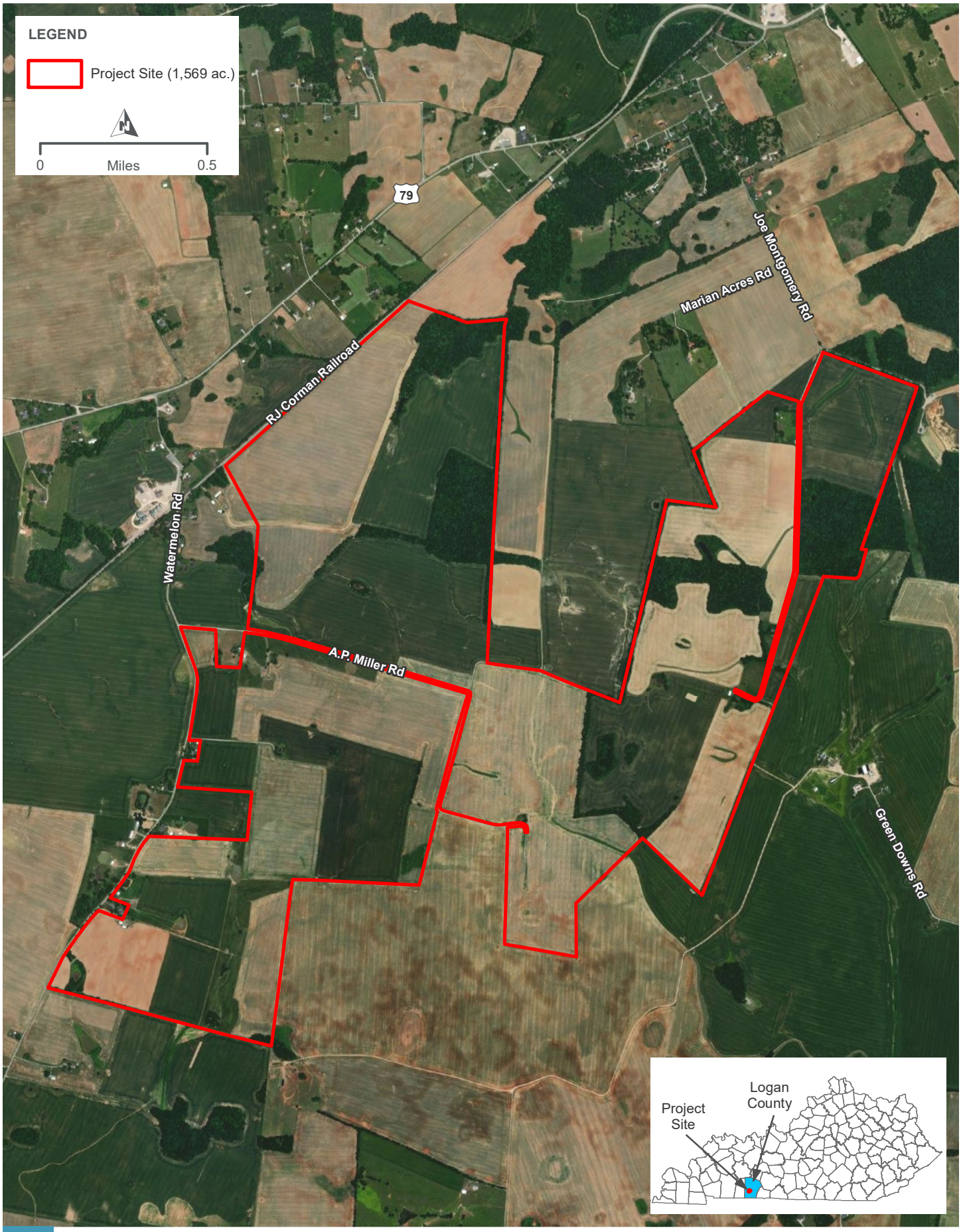


LOGAN COUNTY SOLAR

LAND USE MAP

FIGURE 2

NOISE AND TRAFFIC ASSESSMENT

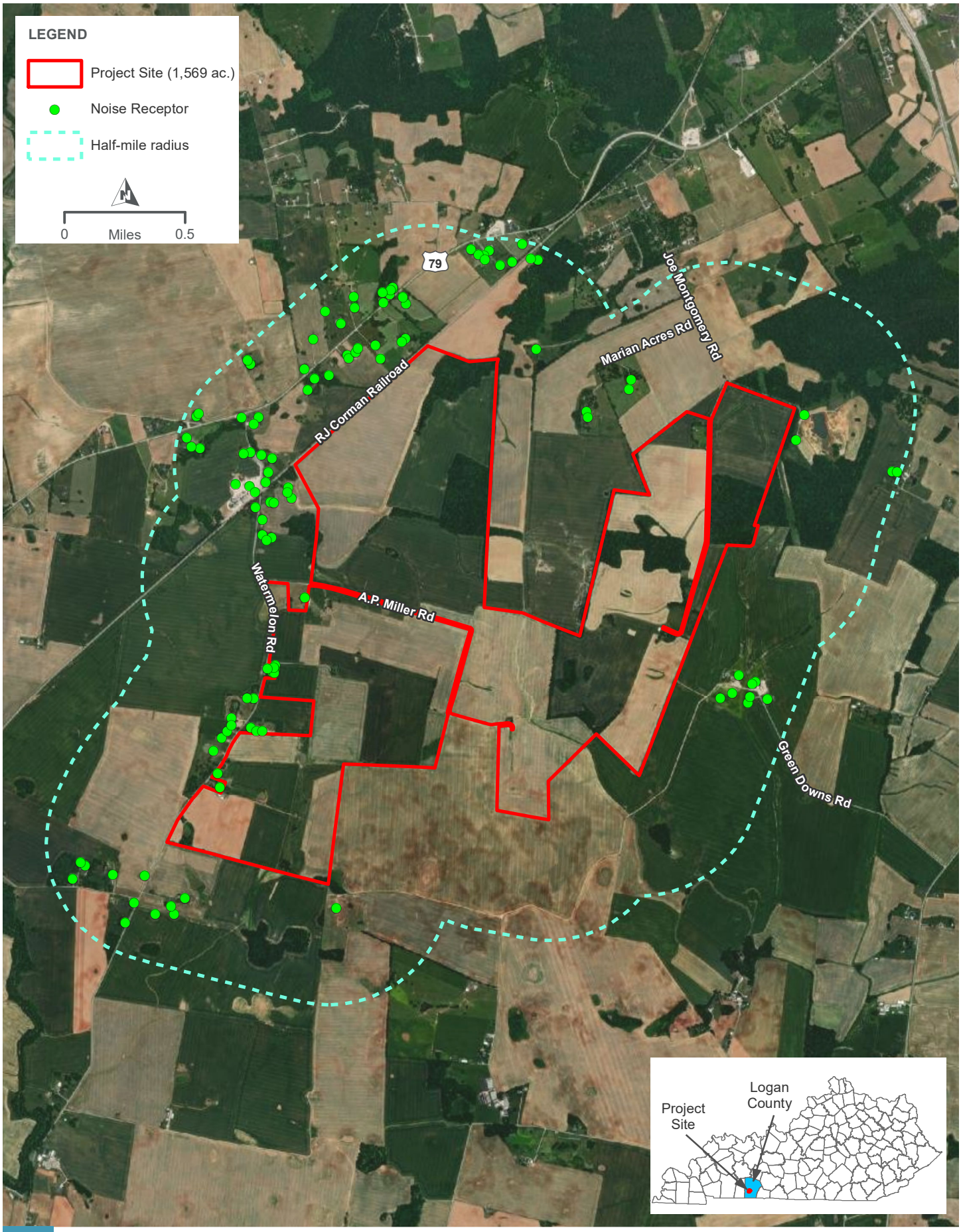


LOGAN COUNTY SOLAR

AERIAL IMAGERY MAP

FIGURE 3

NOISE AND TRAFFIC ASSESSMENT



LOGAN COUNTY SOLAR

NOISE RECEPTOR MAP

FIGURE 4

B

Appendix B – Site Plans

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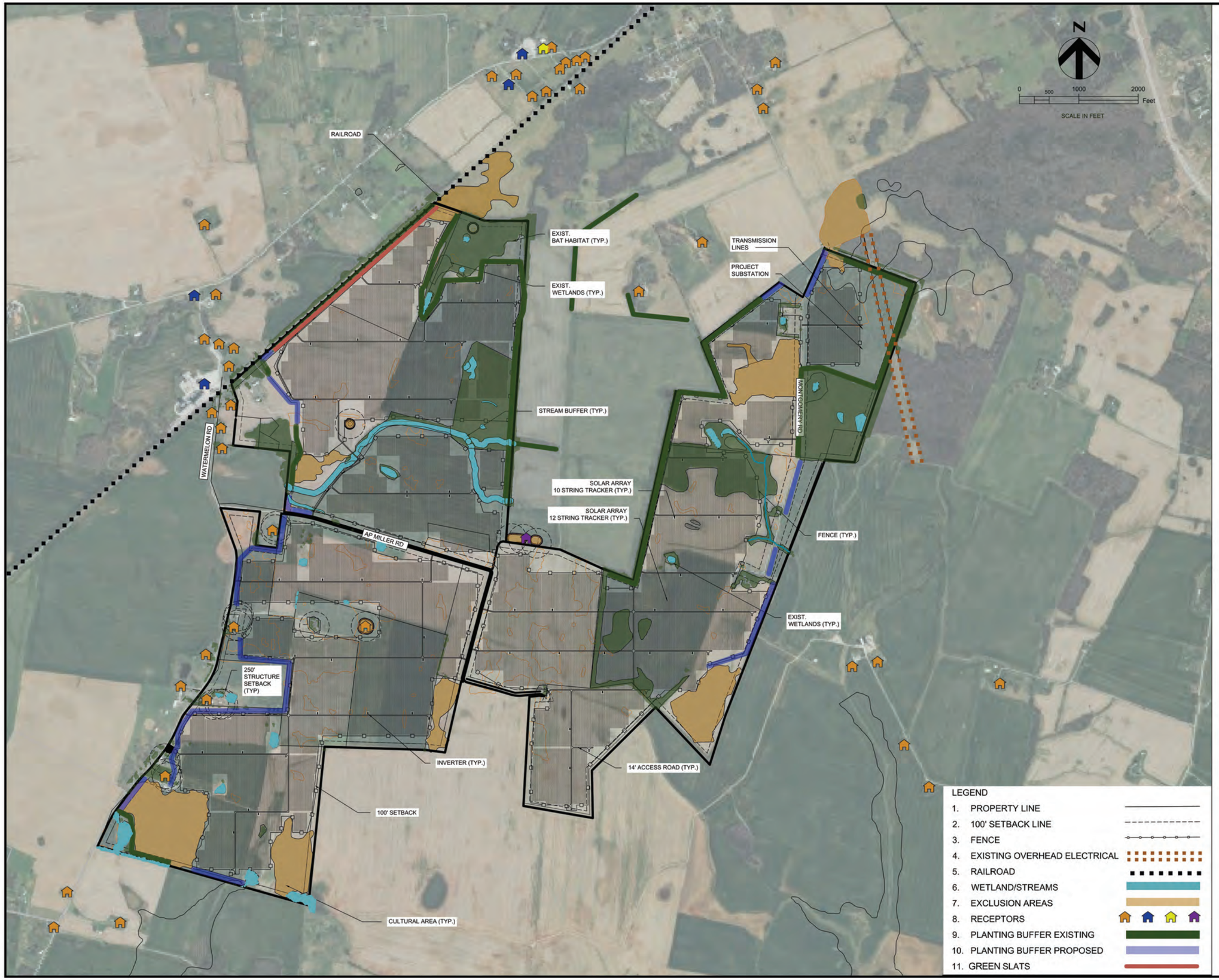

HDR

SILICON RANCH

NOT FOR CONSTRUCTION

LOGAN COUNTY SOLAR

RUSSELLVILLE, KY

LAT: 36.788944°N
LON: -86.947884°W

REV. NO	DESCRIPTION	DATE

SHEET TITLE:

PRELIMINARY SITE LAYOUT

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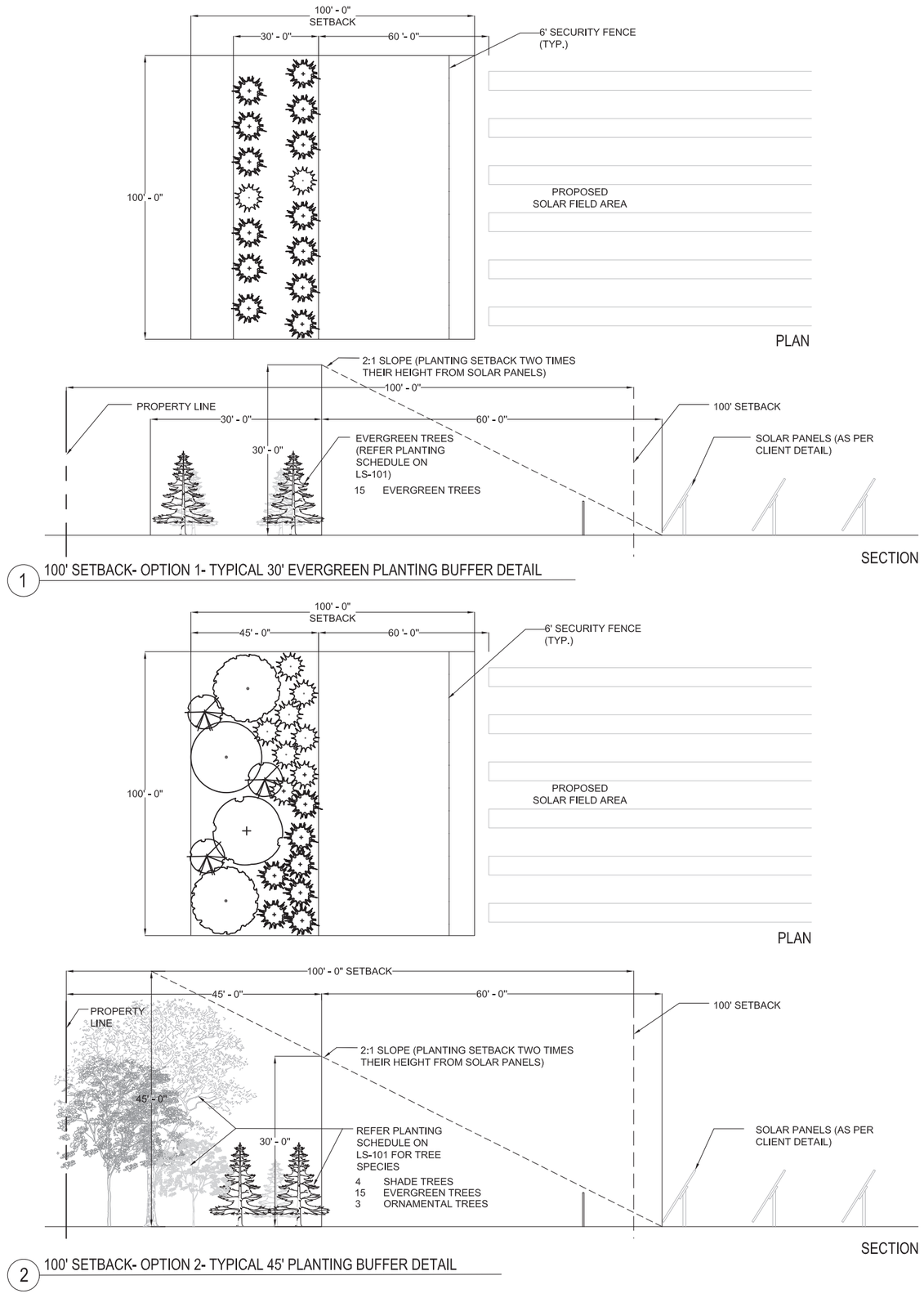
DRAWING NO.

L100



1 100' SETBACK- OPTION 1- TYPICAL 30' EVERGREEN PLANTING BUFFER DETAIL

2 100' SETBACK- OPTION 2- TYPICAL 45' PLANTING BUFFER DETAIL

PLANT REQUIREMENTS:

1. PLANT TYPES

There are five basic plant types referred to in this section, and all shall require the use of locally-adapted plants. They include shade trees, evergreen trees, deciduous understory trees, evergreen understory trees and shrubs, defined as follows:

(1) Shade Trees -Large deciduous shade trees with a mature height of 30 feet or greater and a mature spread of 30 feet or greater.

(2) Evergreen Trees -Trees at least 20 feet tall at maturity usually having green foliage throughout all seasons of the year.

(3) Deciduous Understory Trees -Small deciduous trees or large deciduous shrubs with a mature height of 10 to 30 feet, except under overhead utilities, where lower heights at maturity may be required.

(4) Evergreen Understory Trees -Trees or large shrubs at least ten feet tall at maturity that usually have green foliage throughout all seasons of the year.

(5) Shrubs (Deciduous and Evergreen) -Prostrate or upright woody plants, either evergreen or deciduous. Evergreen shrubs usually have green foliage throughout all seasons of the year. Shrubs are broken down into two categories- large shrub- 10 feet or greater height at maturity, and small shrubs - 5-6 feet height at maturity.

2. PLANT MATERIAL REQUIREMENTS

(1) Plant material shall meet the following minimum requirements listed below. When determining the quantity of plant material required, the quantity shall always be rounded up to the nearest whole number.

(a) All plant material shall meet or exceed size and shape relationships specified in the latest edition of The American Standard for Nursery Stock published by the American Association of Nurserymen.

(b) AAN - American Standard for Nursery Stock.

(c) ANLA - American Nursery and Landscape Association.

(d) ANSI- American National Standards Institute:

(i) A300, Tree Care Operations- Tree, Shrub and Other Woody Plant Maintenance- Standard Practices; Tree Pruning: ANSI A300 Pruning Standards for Woody Plants

(ii) Z60.1, Nursery Stock

(e) FSC Forest Stewardship Council: Forest Stewardship Council Guidelines.

(2) Trees

(a) Shade Trees

(i) Shade trees shall have a minimum size of 2 ½ inch caliper at time of planting.

(b) Evergreen Trees

(i) Evergreen trees shall have a minimum height of 8 feet at the time of planting.

(c) Deciduous Understory Trees

(i) Deciduous understory trees with single stems shall have at a minimum size of 1 ½ inch caliper and a minimum height of 8 feet at the time of planting.

(ii) Multi-stemmed deciduous understory trees shall have a minimum height of 8 feet at the time of planting.

(d) Evergreen Understory Trees

(i) Evergreen understory trees shall have a minimum height of 6 feet at the time of planting.

(e) Mixing of Tree Species

(i) When 10 or more trees are required to be planted on a site to meet these regulations, a mix of species shall be provided. The following indicates the maximum percentage of trees of the same genus and species that may be planted:
A mix of shade, ornamental and evergreen tree species shall be planted on the site. A maximum of only 10 percent of each shade tree species may be used, exception being Quercus. 25 percent of Quercus species may be planted as long as no one variety exceeds 5 percent of the overall numbers.

PLANTING MATERIAL, MIXING OF TREE SPECIES

Total Trees Planted on Site	Min Species Required	Max % of One Species
11-20 Trees	3	25%
21-40 Trees	4	20%
41-80 Trees	6	15%
81-150 Trees	8	10%
150-200 Trees	10	9%
200-250 Trees	12	7%
250-300 Trees	14	5%
300-350 Trees	16	5%
350-400 Trees	18	5%
400-450 Trees	20	5%
500+ Trees	22	5%

(3) Deciduous and Evergreen Shrubs

(a) All shrubs shall be native, cold hardy and heat tolerant.

(b) Upright large shrubs shall be a minimum of 4 to 6 feet in height at the time of planting.

(c) Upright small shrubs shall be a minimum of 15 inches in height at the time of planting.

(d) Small shrubs shall not be planted closer than 3 feet on center. Large shrubs shall not be planted closet than 6 free on center. All shrubs shall not be planted closer than 3 feet to planted trees, nor within 6 feet of existing protected trees; however, no more than 25 percent of the root protection zone of an existing tree may be disturbed with new plantings.

3. INSTALLATION

(1) The International Society of Arboriculture (ISA) maintains standards for tree plantings. All installations shall adhere to the standards published by the ISA.

4. MAINTENANCE

(1) All plantings must be maintained in a healthy state. Should any vegetation that was required to meet the standards of this section die within two years of planting, the plants must be replaced with the same or comparable species. Refer to landscape standards in section 2. (1).

5. LOCATION OF BUFFER

(1) Location of buffer Option 1/Option 2 will be determined by the owner.

HDR

SILICON RANCH

NOT FOR CONSTRUCTION

LOGAN COUNTY SOLAR

RUSSELLVILLE, KY

LAT: 36.788944°N
LON: -86.947884°W

REV. NO	DESCRIPTION	DATE

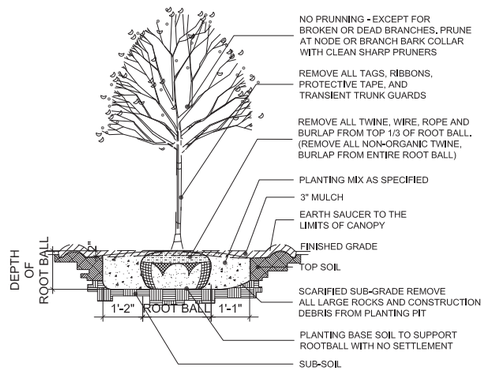
SHEET TITLE:

PLANTING BUFFER & DETAILS

PROJ. MGR.	PROJ. ENGR.	DATE:
HRS	MWB	12-08-2021
DRAWN BY:	CHECKED BY:	SCALE:
AM		

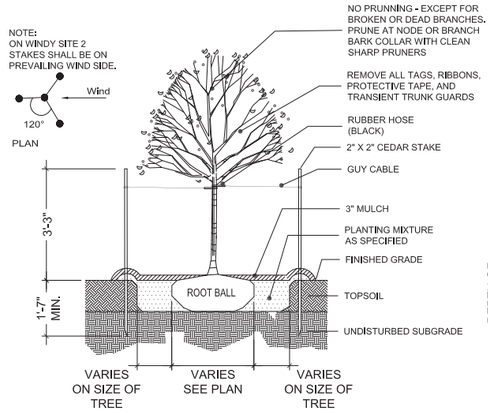
DRAWING NO.

LS100



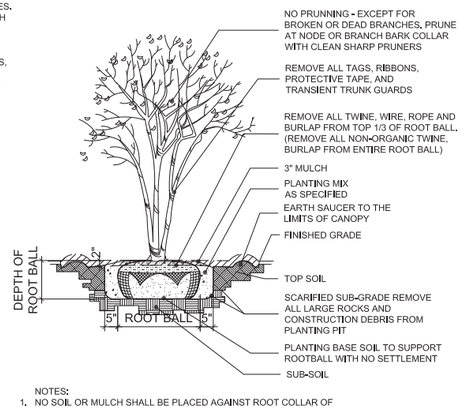
NOTES:
1. NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT.
2. REMOVE ALL ROPE FROM TRUNK & TOP OF ROOT BALL. FOLD BURLAP BACK BELOW GRADE.
3. STAKING IS NOT REQUIRED UNLESS PROPER VERTICAL ALIGNMENT OF PLANT CANNOT BE MAINTAIN DUE TO WINDY CONDITIONS, OR IF PLANTING ON A STEEP SLOPE STAKING MAY BE REQUIRED, SEE DETAIL.

1 UNDERSTORY TREE PLANTING



NOTES:
1. NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT.
2. REMOVE ALL ROPE FROM TRUNK & TOP OF ROOT BALL. FOLD BURLAP BACK BELOW GRADE.
3. SEE RELATED PLANTING DETAILS PER TREE SIZE FOR ALL OTHER RELATED DETAILS AND DEPTHS FOR TREE PLANTING.

2 DECIDIOUS TREE STAKING



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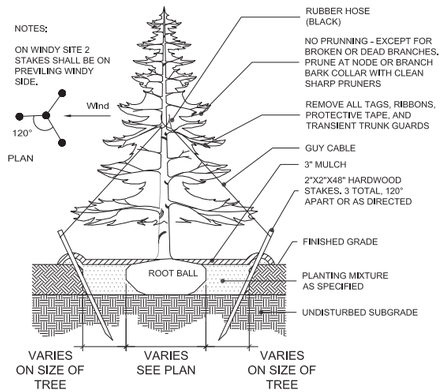
3 MULTI-STEM AND/OR UNDERSTORY PLANTING



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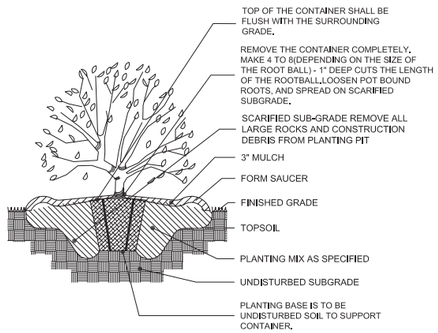
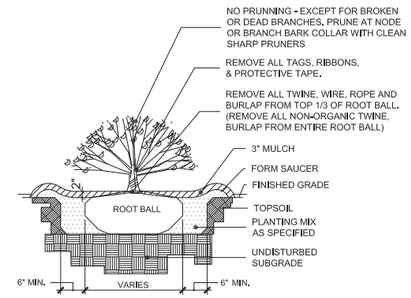
4 EVERGREEN TREE PLANTING



5 CONTAINER SHRUB PLANTING



6 B&B SHRUB PLANTING

Russellville Solar Preferred Plant List

TREES

Code	Botanical Name	Common Name	Size	Notes
	Acer rubrum	Red Maple	2 1/2" cal.	
	Acer saccharum	Sugar Maple	2 1/2" cal.	
	Aesculus glabra	Ohio Buckeye	2 1/2" cal.	
	Aesculus flava	Yellow Buckeye	2 1/2" cal.	
	Aesculus pavia	Red Buckeye	2 1/2" cal.	
	Betula lenta	Yellow Birch	2 1/2" cal.	
	Betula nigra	River Birch	2 1/2" cal.	
	Carpinus caroliniana	American Hornbeam	2 1/2" cal.	
	Carya illinoinensis	Pecan	2 1/2" cal.	
	Carya glabra	Pignut	2 1/2" cal.	
	Carya laciniosa	Shellbark Hickory	2 1/2" cal.	
	Carya ovata	Shadbark Hickory	2 1/2" cal.	
	Cladrastis kentukea	Yellowwood	2 1/2" cal.	
	Diospyros virginiana	Perisimmon	2 1/2" cal.	
	Fagus grandifolia	American Beech	2 1/2" cal.	
	Gleditsia tricanthos	Honeylocust	2 1/2" cal.	
	Gymnocladus dioicus	Kentucky Coffeetree	2 1/2" cal.	
	Jugians nigra	Black Walnut	2 1/2" cal.	
	Liquidambar styriciflua	Sweetgum	2 1/2" cal.	
	Liriodendron tulipifera	Yellow Popular	2 1/2" cal.	
	Magnolia acuminata	Cucumbertree Magnolia	2 1/2" cal.	
	Magnolia macrophylla	Bigleaf Magnolia	2 1/2" cal.	
	Magnolia tripetala	Umbrella Magnolia	2 1/2" cal.	
	Ostrya virginiana	Americian Hophornbeam	2 1/2" cal.	
	Platanus occidentalis	Sycamore	2 1/2" cal.	
	Populus deltoides	Eastern Cottonwood	2 1/2" cal.	
	Quercus alba	White Oak	2 1/2" cal.	
	Quercus coccinea	Scarlet Oak	2 1/2" cal.	
	Quercus imbricaria	Shingle Oak	2 1/2" cal.	
	Quercus michauxii	Swamp Chestnut Oak	2 1/2" cal.	
	Quercus muehlenbergii	Chinkapin Oak	2 1/2" cal.	
	Quercus macrocarpa	Bur Oak	2 1/2" cal.	
	Quercus pagoda	Cherrybark Oak	2 1/2" cal.	
	Quercus palustris	Pin Oak	2 1/2" cal.	
	Quercus phellos	Willow Oak	2 1/2" cal.	
	Qurcus prinus	Chestnut Oak	2 1/2" cal.	
	Quercus rubra	Northern Red Oak	2 1/2" cal.	
	Quercus stellata	Post Oak	2 1/2" cal.	
	Quercus velutina	Black Oak	2 1/2" cal.	
	Robinia pseudoacacia	Black Locust	2 1/2" cal.	
	Sassafras albidum	Sassafras	2 1/2" cal.	
	Tilia americana	American Linden	2 1/2" cal.	
EVERGREEN TREES				
	Ilex opaca	American Holly	8-10' height	
	Juniperus virginiana	Eastern Red Cedar	8-10' height	
	Pinus strobus	Eastern White Pine	8-10' height	
	Pinus virginiana	Virginia Pine	8-10' height	
	Taxodium distichum	Bald Cypress	8-10' height	
	Tsuga canadensis	Eastern Hemlock	8-10' height	
ORNAMENTAL				
	Amelanchier canadensis	Shadblow Serviceberry	1 1/2" cal. - 8' Height	
	Cercis canadensis	Eastern Redbud	1 1/2" cal. - 8' Height	
	Chionanthus virginicus	Fringetree	1 1/2" cal. - 8' Height	
	Cornus alternifolia	Pagoda Dogwood	1 1/2" cal. - 8' Height	
	Cornus floridus	Flowering Dogwood	1 1/2" cal. - 8' Height	
	Crataegus crusgalli	Cockspur Hawthorne	1 1/2" cal. - 8' Height	
	Lagerstremia indica	Crape Myrtle	1 1/2" cal. - 8' Height	
	Nyssa sylvatica	Blackgum	1 1/2" cal. - 8' Height	
	Prunus serotina	Black Cherry	1 1/2" cal. - 8' Height	
SHRUBS				
	Aronia arbuifolia	Red Chokeberry	Large Shrub	
	Asiminia triloba	Pawpaw	Large Shrub	
	Ceanothus americana	NJ Tea	Small Shrub	
	Cephalantha occidentailis	Buttonbush	Large Shrub	Wet Soils
	Clethra alnifolia	Sweet Pepperbush	Small Shrub	
	Cornus racemosa	Gray Dogwood	Small Shrub	
	Cornus amomun	Silky Dogwood	Small Shrub	
	Hamamelis virginiana	Common Witchhazel	Large Shrub	
	Hydrangea arborescens	Wild Hydrangea	Small Shrub	
	Hydrangea quercifolia	Oakleaf Hydrargea	Small Shrub	
	Ilex decidua	Possumhaw deciduous Holly	Large Shrub	Tolerates Wet
	Ilex verticillata	Winterberry Holly	Small Shrub	
	Itea virginica	Virginia Sweetspire	Small Shrub	Semi-evergreen
	Lindera benzoin	Spicebush	Large Shrub	
	Physocarpopulifolius	Ninebark	Small Shrub	
	Rhodo. canescens	Piedmont Azalea	Large Shrub	Susceptable to Deer Damage
	Rhodo. periclymenoides	Pinxterbloom Azalea	Small Shrub	Susceptable to Deer Damage
	Rhus aromatica	Fragrant Sumac	Small Shrub	
	Rosa carolina	Carolina Rose	Small Shrub	
	Prunus americana	American Plum	Large Shrub	
	Stapyea trifolia	American Bladdernut	Large Shrub	
	Viburnum arboreum	Farkleberry-	Large Shrub	
	Viburnum dentatum	Arrowwood Viburnum	Large Shrub	
	Viburnum rufidulum	Rusty Black Viburnum	Large Shrub	

HDR

SILICON RANCH

NOT FOR CONSTRUCTION

LOGAN COUNTY SOLAR

RUSSELLVILLE, KY

LAT: 36.788944°N
LON: -86.947884°W

REV. NO	DESCRIPTION	DATE

SHEET TITLE:

PLANTING DETAILS & SCHEDULE

PROJ. MGR.	PROJ. ENGR.	DATE:
HRS	MWB	12-08-2021
DRAWN BY:	CHECKED BY:	SCALE:
AM		

DRAWING NO.

LS101

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