

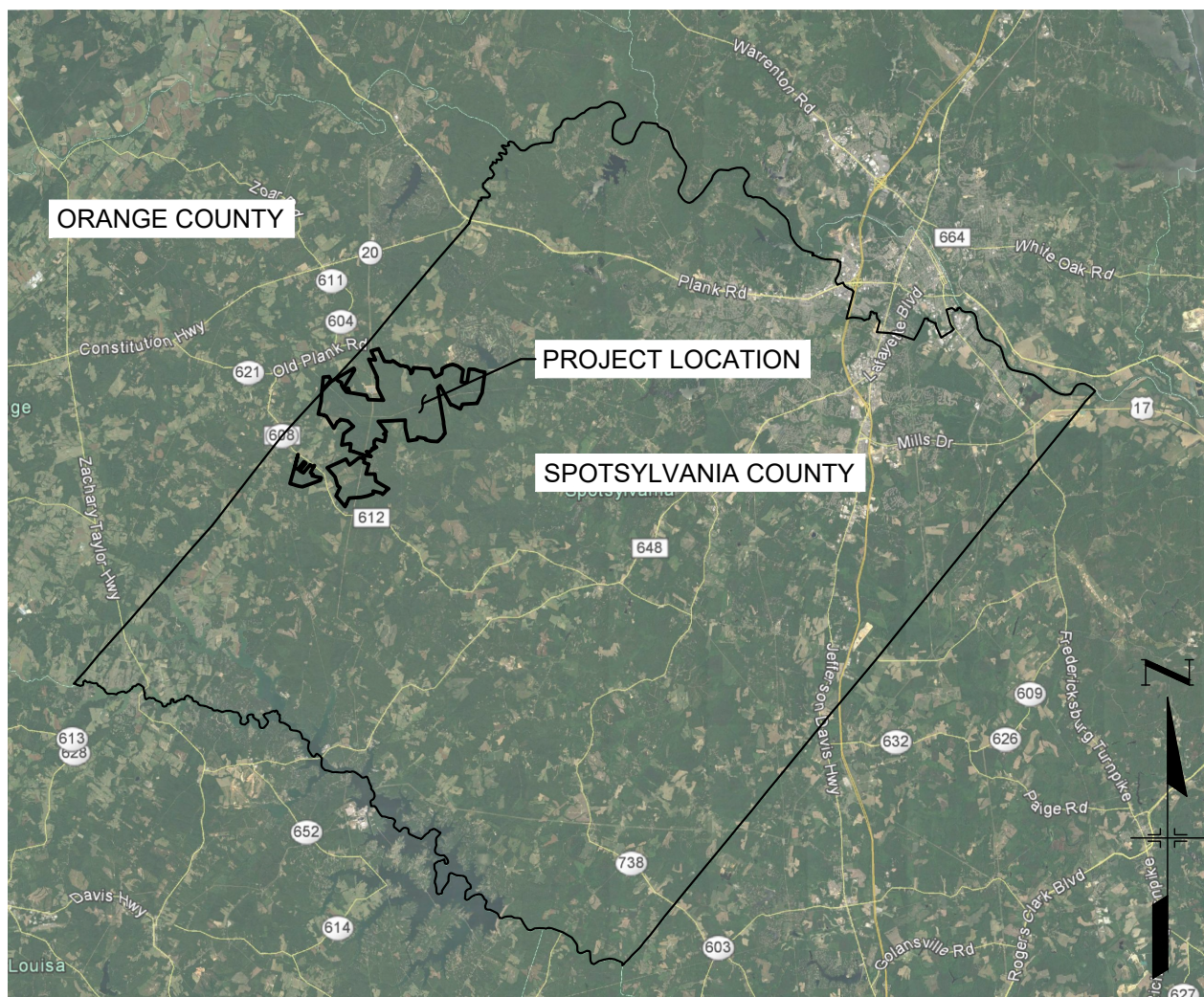
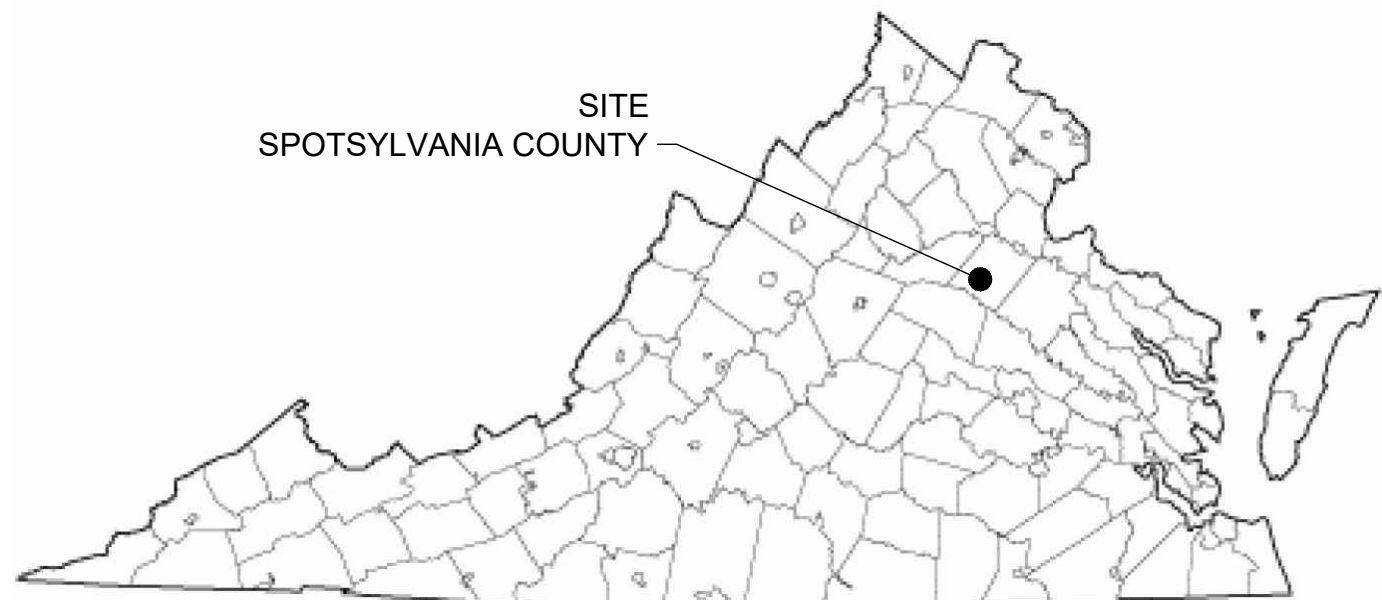
GENERALIZED DEVELOPMENT PLANS

SPOTSYLVANIA SOLAR ENERGY CENTER B

SPECIAL USE PERMIT - SUP 18-0002

LIVINGSTON MAGISTERIAL DISTRICT

SPOTSYLVANIA COUNTY, VA

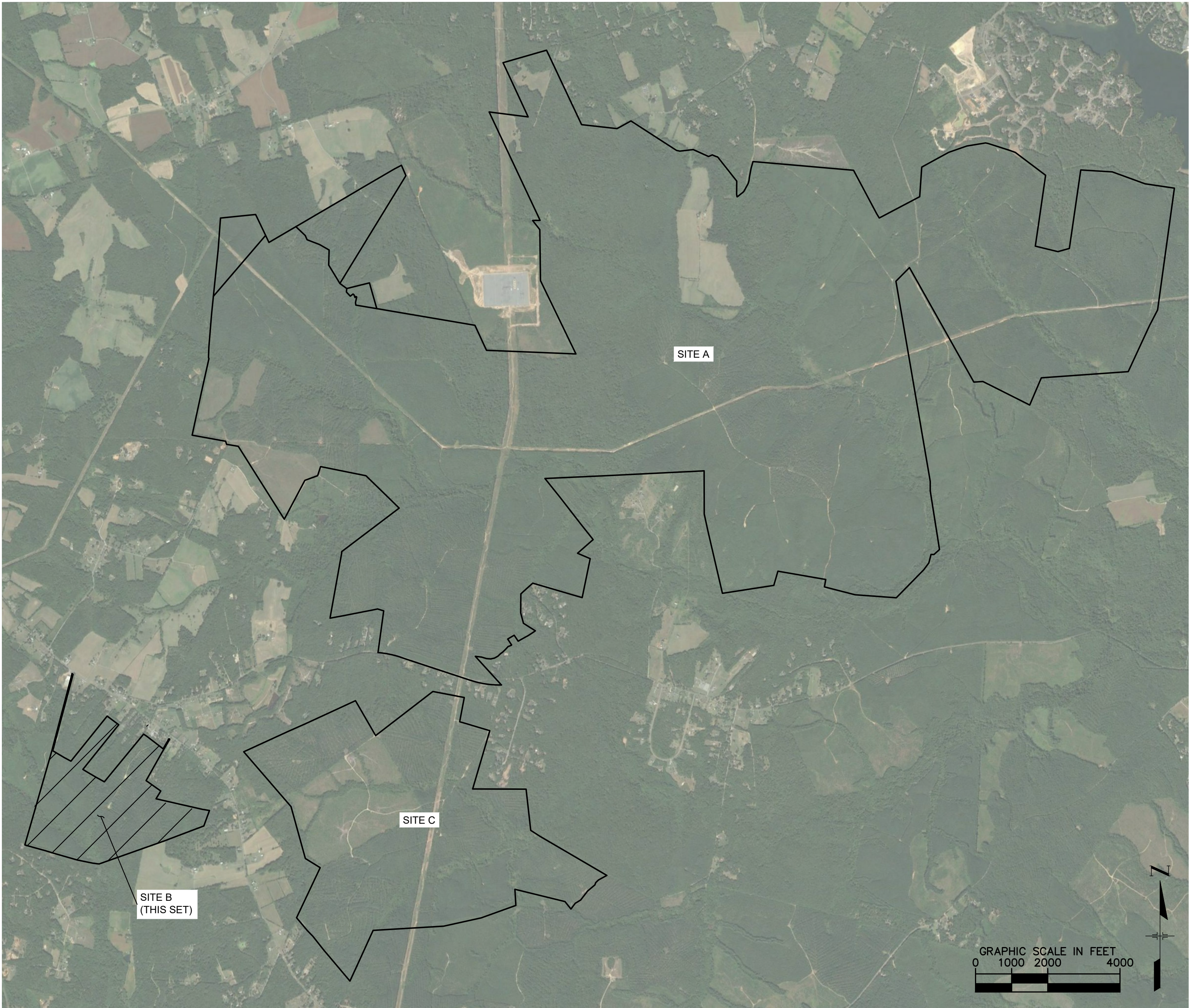


VICINITY MAP - SPOTSYLVANIA COUNTY, VA
1" = 30,000'

SPOTSYLVANIA SOLAR ENERGY CENTER	
OWNER	sPOWER
EXISTING AND PROPOSED ZONING	AGRICULTURE 3 (A-3)
EXISTING USE	SILVICULTURE
PROPOSED USE	SOLAR ENERGY FACILITY
TOTAL POWER TO BE GENERATED	500 MEGAWATTS AC (MWac)
OVERALL PROJECT SITE DATA:	
PROPERTY AREA	6,350 ACRES
DISTURBED AREA	3,500 ACRES
POWER GENERATED	500 MWac
SITE A DATA:	
PROPERTY AREA	5,200 ACRES
DISTURBED AREA	2,800 ACRES
POWER GENERATED	400 MWac
SITE B DATA:	
PROPERTY AREA	245 ACRES
DISTURBED AREA	200 ACRES
POWER GENERATED	30 MWac
SITE C DATA:	
PROPERTY AREA	905 ACRES
DISTURBED AREA	500 ACRES
POWER GENERATED	70 MWac

OWNER/APPLICANT
sPOWER
2180 SOUTH 1300 EAST, SUITE 600
SALT LAKE CITY, UT 84106
CONTACT: DANIEL MENAHEM
EMAIL: DMENAHM@SPOWER.COM

CIVIL ENGINEER
KIMLEY-HORN AND ASSOCIATES, INC.
11400 COMMERCE PARK DRIVE, SUITE 400
RESTON, VA 20191
PHONE: 703-674-1337
CONTACT: SEAN MILLOT, P.E.
EMAIL: SEAN.MILLOT@KIMLEY-HORN.COM



VICINITY MAP - PROJECT LIMITS
1" = 2,000'

Sheet List Table	
Sheet No.	Sheet Title
C-01	GENERALIZED DEVELOPMENT PLAN COVER
EX-2-1	GENERALIZED DEVELOPMENT PLAN
EX-2-2	PRESERVATION AREA PLAN
EX-2-3	LANDSCAPE AND BUFFER AREA PLAN
EX-2-4	ACCESS ROAD SERVICE AREAS
CD-1	CIVIL DETAILS
SHEETS 1-17	ALTA SURVEY

PROJECT INFORMATION - SITE B			
OWNER INFORMATION			
OWNER		TAX MAP PARCEL NUMBER	
RIVEROAK TIMBERLAND INVESTMENTS LLC		28-A-58	
NO KNOWN AIRPORTS WITHIN 5-MILES RADIUS OF SITE B.			
CULTURAL RESOURCES			
NO KNOWN HISTORIC BUILDINGS OR FEATURES WITHIN PROXIMITY OF SITE.			
TRAFFIC INFORMATION			
• VOLUMES SUBJECT TO CHANGE BASED ON TRAFFIC IMPACT STUDY RESULTS			
• SEE TRAFFIC IMPACT ANALYSIS AND EXHIBITS FOR ADDITIONAL TRAFFIC DISTRIBUTION AND RECOMMENDATIONS			
• PROPOSED CONSTRUCTION TRAFFIC: 200 VEHICLES PER DAY			
IMPERVIOUS AREAS*			
	TOTAL	AREA (SF)	AREA (AC)
SOLAR PANEL POST** (0.11 SF EACH)	16326	1796	0.04
INVERTER PAD (40' X 10')	4	1600	0.04
GRAVEL DRIVES (12' WIDTH)	5074 LF	60888	1.40
TOTAL IMPERVIOUS ACRES			1.48
TOTAL IMPERVIOUS % OF SITE			0.60%
*IMPERVIOUS AREAS SHOWN FOR THE SITE ARE FOR PRELIMINARY USE ONLY. NOT TO BE USED FOR DESIGN PURPOSES.			
**PER DEQ REGULATIONS, ONLY POLE MOUNTINGS FOR THE SOLAR PANELS ARE TO BE USED TO CALCULATE IMPERVIOUS AREA. ASSUMED SPACING OF 15' SUBJECT TO FINAL ENGINEERING.			
WATER QUALITY (VRRM)**			
TP LOAD REDUCTION REQUIRED (LB/YR)			-29.56
ACRES PLACED IN CONSERVATION AREA			155.52
***WATER QUALITY VALUES SHOWN FOR THE SITE ARE FOR PRELIMINARY USE ONLY. NOT TO BE USED FOR DESIGN PURPOSES.			

NOTES:
• ACCORDING TO THE SPOTSYLVANIA "TRAILWAYS MASTER PLAN", NO TRAILS ARE PLANNED WITHIN SITE B.

SOLID WASTE DISPOSAL CALCULATIONS FOR CONSTRUCTION
FOR SITES A, B, AND C

Step 1: Identification of Collection Method					
Container Type (Compactor, Roll Off, Dumpster, Carts)	Size (Cubic Yards)	Number of Containers	Number of Pickups Per Week	Material (Trash or Recycle)	
Compactor	40 YD	2	1	Trash	
Compactor	40 YD	0	2	Recycle	
Spotsylvania County Non-Residential Waste Generation Report The purpose of this report is to calculate the annual waste amount generated from a proposed project and to ensure adequate collection service is provided.					
Step 1: Determination of Annual Waste Generation					
Complete the table for the proposed project being submitted. In the column labeled "Floor Area" enter the amount of square feet being occupied by each use. Multiply each square footage figure by the corresponding value in the "Annual Waste Generation Rate" column, and then list the value in "Annual Tonnage" column. Add all values in the "Annual Tonnage" column and enter the total next to "Combined Annual Waste Stream."					
Building Use	Floor Area (square feet)	Annual Waste Generation Rate (lbms/sq ft)	Annual Waste Generation (lbms)	Annual Waste Generation Rate (lbms)	
Office	250	0.0013	0.325		
Industrial	X	0.0016	=	0	
Food/Restaurant	X	0.0027	=	0	
Public Facility	X	0.00105	=	0	
Business/School	X	0.00105	=	0	
Warehouse	X	0.00155	=	0	
Combined Annual Waste Stream			0.325		
Step 2: Determination of Minimum Storage Capacity					
Determination of Minimum Storage Container and/or Dumpster Size (With Onsite Recycle Program)					
Container Type	Size (Cubic Yards)	Number of Containers	Number of Pickups Per Week	Material (Trash or Recycle)	Minimum Size of Each Storage Container (or Dumpster) (Cubic Yards)
Compactor	40 YD	2	1	Trash	0.54
Compactor	40 YD	0	2	Recycle	0.54
Determination of Minimum Storage Container and/or Dumpster Size (Without Recycle Program)					
Container Type	Size (Cubic Yards)	Number of Containers	Number of Pickups Per Week	Material (Trash or Recycle)	Minimum Size of Each Storage Container (or Dumpster) (Cubic Yards)
Compactor	40 YD	2	1	Trash	0.28
Compactor	40 YD	0	2	Recycle	0.28
Per design standard the project must provide accommodations for future waste recycling. Sufficient area shall be provided at the collection center to accommodate a minimum of two (2) containers or more, of equal capacity, with 1/2 of the total capacity used for refuse collection and 1/2 of the total capacity used for recycle collection.					
Step 3: Identification of Collection Method					
Container Type (Compactor, Roll Off, Dumpster, Carts)	Size (Cubic Yards)	Number of Containers	Number of Pickups Per Week	Material (Trash or Recycle)	
Compactor	10	1	0.5	Trash	

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APPROVAL

SEAN MILLOT
Lic. No. 0402052332
11/20/2018
PROFESSIONAL ENGINEER

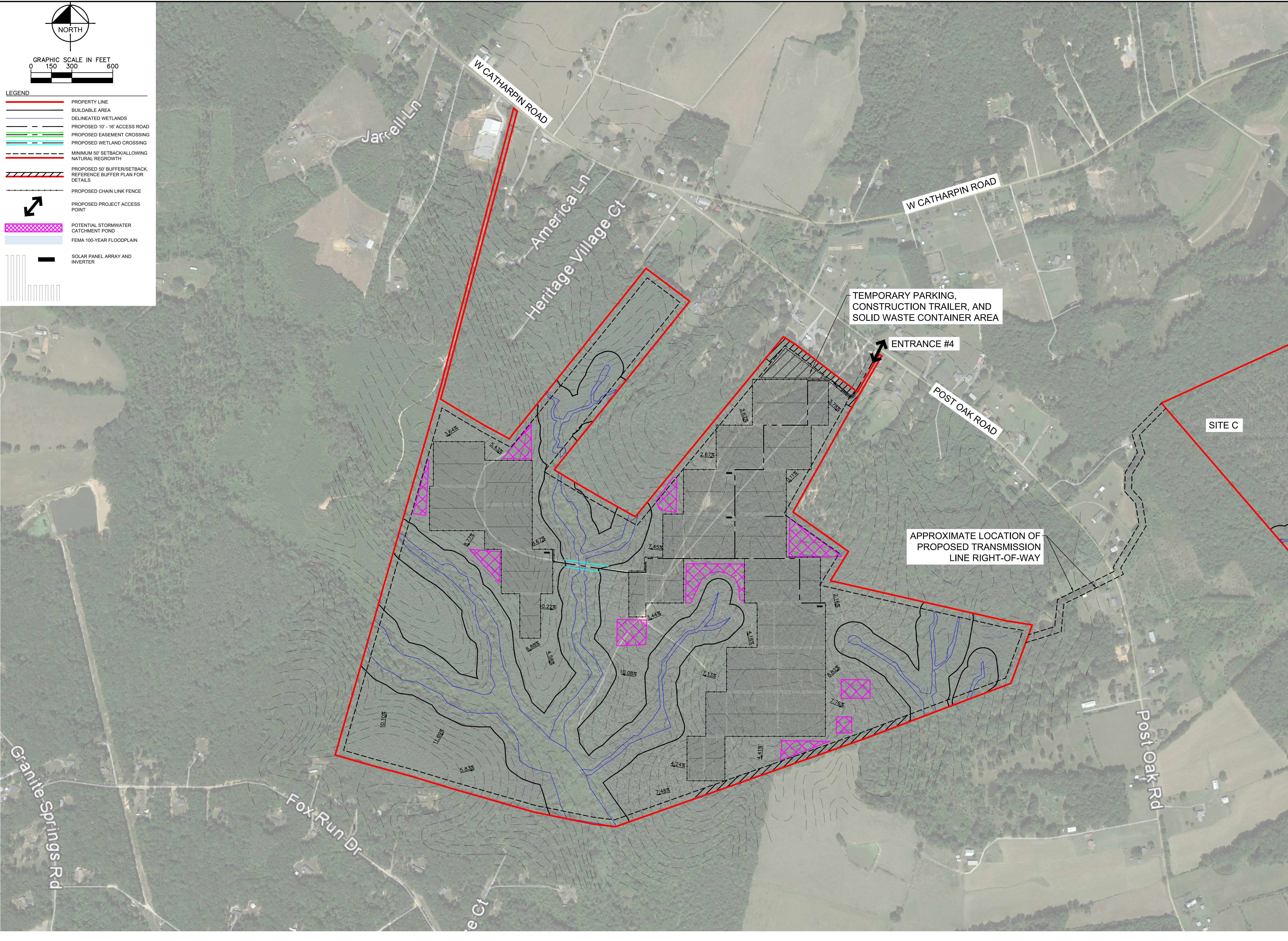
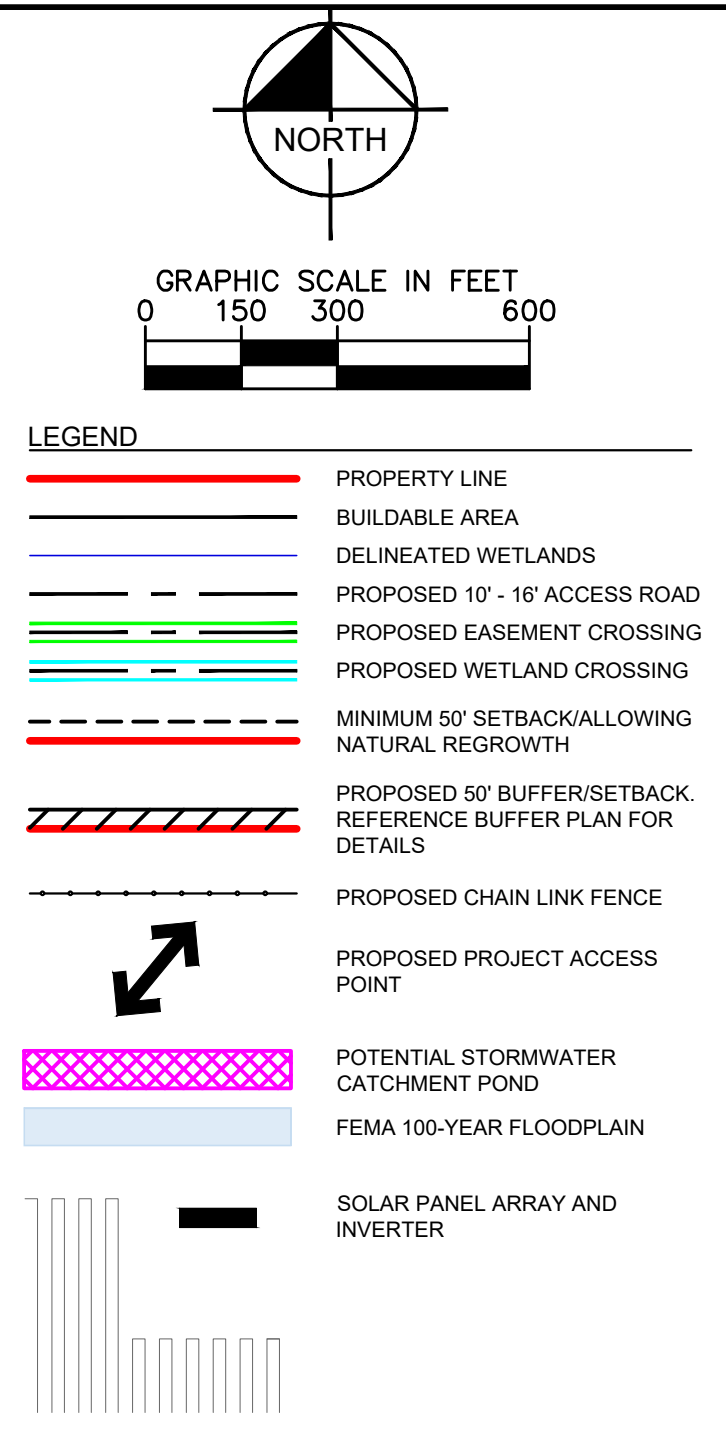
KHA PROJECT	116626000
DATE	11/20/2018
SCALE	AS SHOWN
DESIGNED BY	JRB
DRAWN BY	JRB
CHECKED BY	SMM


SUP 18-0002
GENERALIZED
DEVELOPMENT PLAN
COVER

SPOTSYLVANIA SOLAR
ENERGY CENTER B
PREPARED FOR
S-POWER
SPOTSYLVANIA COUNTY

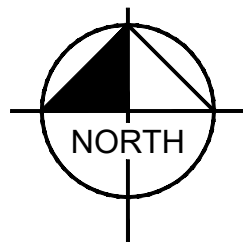
SHEET NUMBER
C-01

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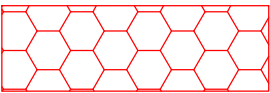
<p>SPOTSYLVANIA SOLAR ENERGY CENTER B</p> <p>PREPARED FOR S-POWER</p> <p>SPOTSYLVANIA COUNTY VIRGINIA</p>	<p>SUP 18-0002 GENERALIZED DEVELOPMENT PLAN</p>	<p>KHA PROJECT 116626000</p> <p>DATE 10/26/2018</p> <p>SCALE AS SHOWN</p> <p>DESIGNED BY JRB</p> <p>DRAWN BY JRB</p> <p>CHECKED BY SWM</p>	<p>Kimley»Horn</p> <p>© 2018 KIMLEY-HORN AND ASSOCIATES, INC. 11400 COMMERCE PARK DR., SUITE 400 DALLAS, TEXAS 75244-2098 PHONE: 703-674-1300 WWW.KIMLEY-HORN.COM</p> <p>APPROVAL</p> <p></p> <p>S-POWER An AES and AEMco Company</p> <p>2180 SOUTH 1300 EAST, SUITE 600 SALT LAKE CITY, UT 84106 PHONE: 801-679-3500 FAX: 801-679-3501 WWW.S-POWER.COM</p>
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GRAPHIC SCALE IN FEET

0 150 300 600



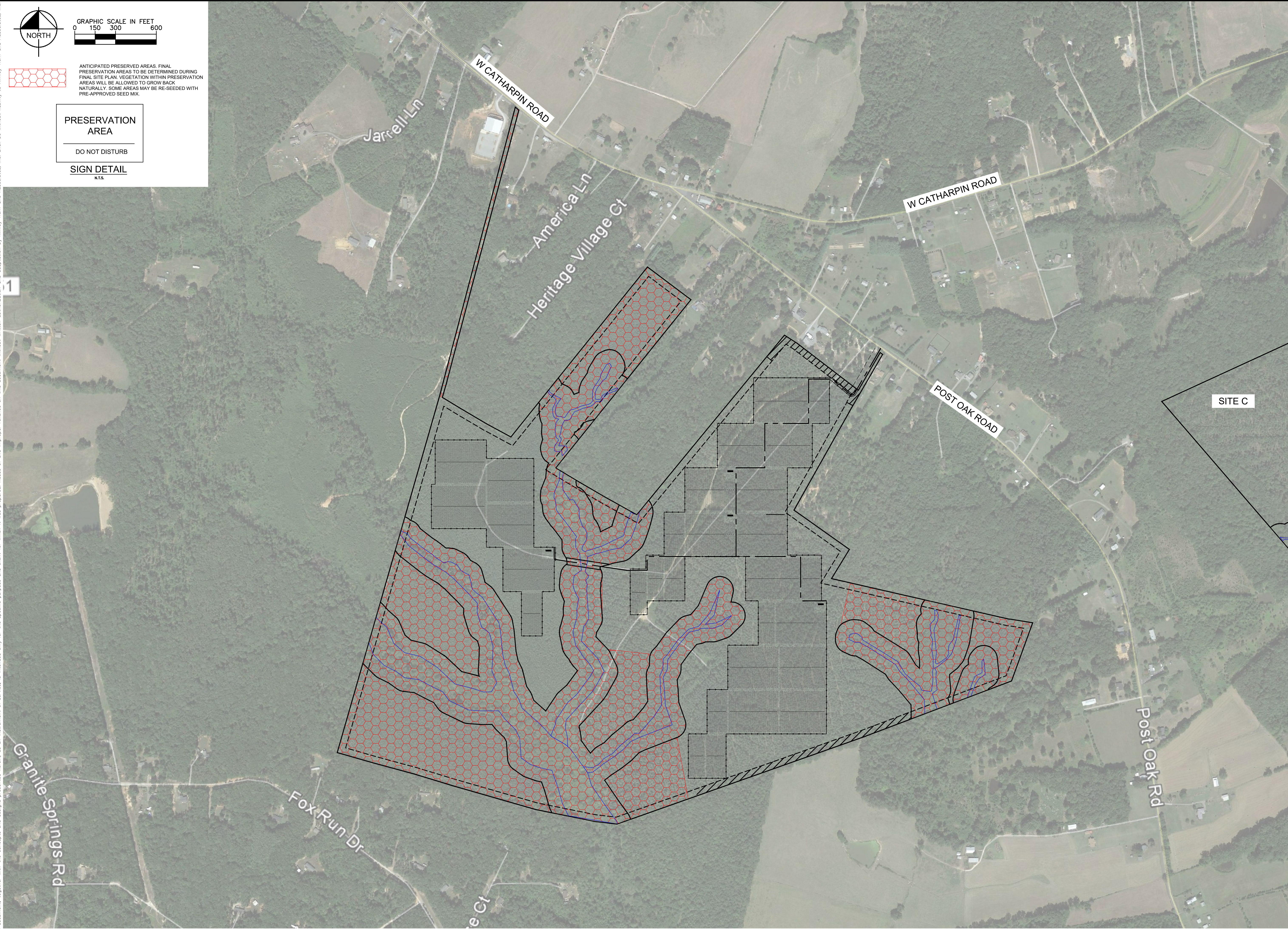
ANTICIPATED PRESERVED AREAS. FINAL PRESERVATION AREAS TO BE DETERMINED DURING FINAL SITE PLAN. VEGETATION WITHIN PRESERVATION AREAS WILL BE ALLOWED TO GROW BACK NATURALLY. SOME AREAS MAY BE RE-SEEDED WITH PRE-APPROVED SEED MIX.

PRESERVATION
AREA

DO NOT DISTURB

SIGN DETAIL

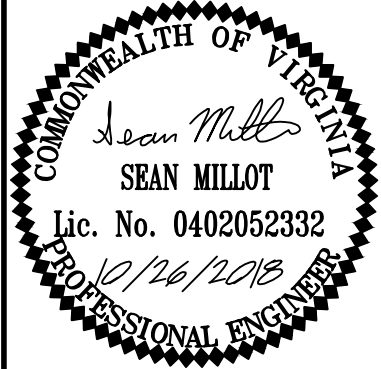
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SPOTSYLVANIA SOLAR
ENERGY CENTER B
PREPARED FOR
S-POWER

SUP 18-0002
PRESERVATION A
PLAN

KHA PROJECT	116626000	DATE	10/26/2018	SCALE	AS SHOWN	DESIGNED BY	JRR	DRAWN BY	JRR	CHECKED BY	SMN
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APPROVAL

Kimley»Horn

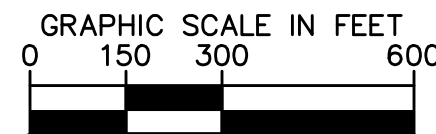
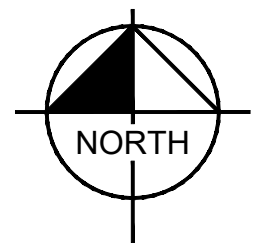
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PROPOSED RE-VEGETATION WITH PLANTINGS PER
OPTION 1 OR OPTION 2 (SEE DETAIL THIS SHEET)

PROPOSED RE-VEGETATION WITH
SAPLINGS

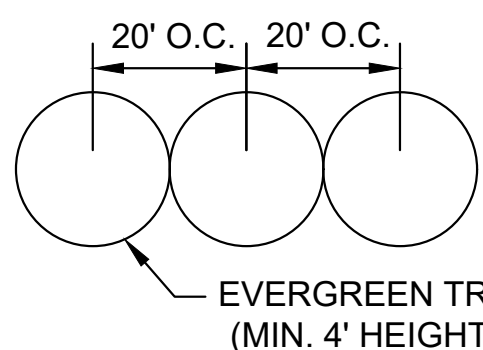
 50' MINIMUM SETBACK WITH PRESERVED VEGETATION

50' MINIMUM SETBACK ALLOWING
VEGETATION TO GROW BACK NATURALLY

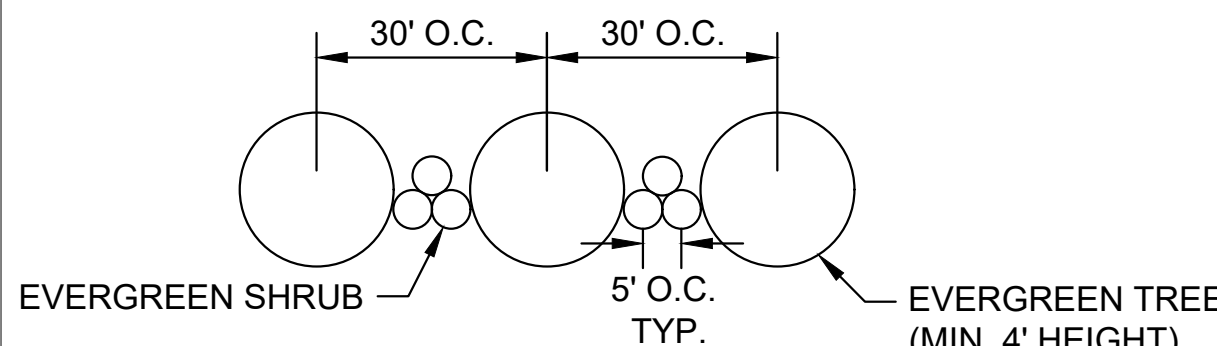
 BUILDING WITHIN 100' OF PARCEL BOUNDARY BUILDING WITHIN 200' OF PARCEL BOUNDARY BUILDING WITHIN 300' OF PARCEL BOUNDARY

NOTES:

1. BUFFER LOCATIONS SHOWN ARE APPROXIMATE AND ARE BASED ON INITIAL PANEL PROXIMITY TO ROADWAYS AND ADJACENT PROPERTIES.
2. PLANTINGS SHALL BE PER OPTION 1 AND/OR OPTION 2 DEPENDING ON PLANT AVAILABILITY AT TIME OF SITE PLAN AND DESIRE TO ADD VARIABILITY TO THE BUFFERS.

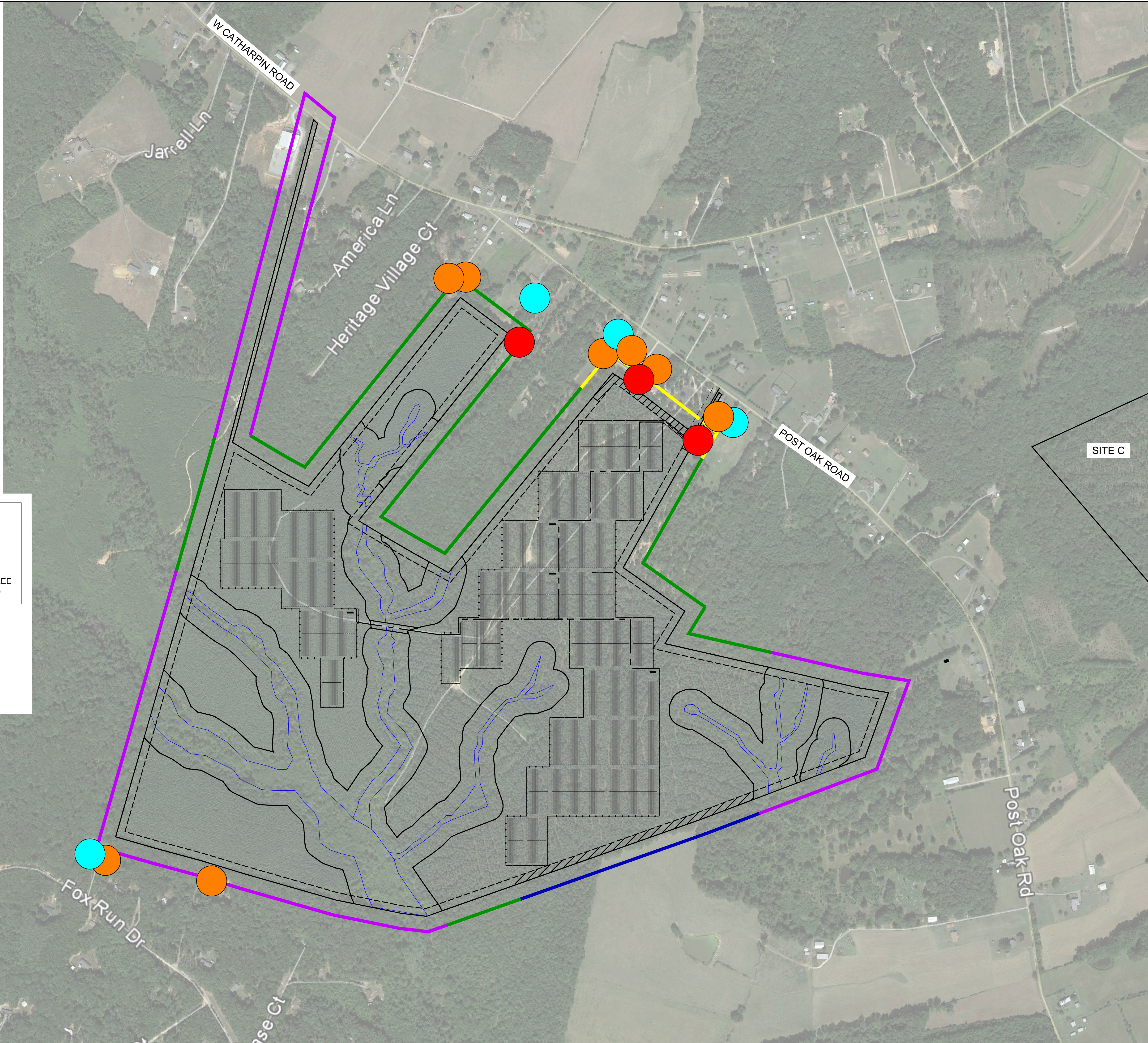


PLANTING OPTION 1
N.T.S.



PLANTING OPTION 2
N.T.S.

BUFFER PLANTING LIST	
EVERGREEN TREES	<p>PICEA ABIES: NORWAY SPRUCE PICEA GLAUCA: WHITE SPRUCE ILEX x NELLIE R STEVENS: NELLIE R STEVENS HOLLY JUNIPERUS VIRGINIANA: EASTERN RED CEDAR ILEX OPACA: AMERICAN HOLLY</p>
EVERGREEN SHRUBS	<p>MYRTICA CARIFERA: SOUTHERN WAX MYRTLE MYRTICA THEROPHYLLA: SOUTHERN BAYBERRY RHODODENDRON PRINCEPATRICK: PRINCEPATRICK RHODODENDRON RHODODENDRON VISCOSUM: SWAMP AZALEA</p>

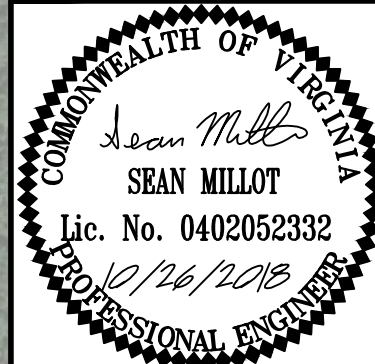


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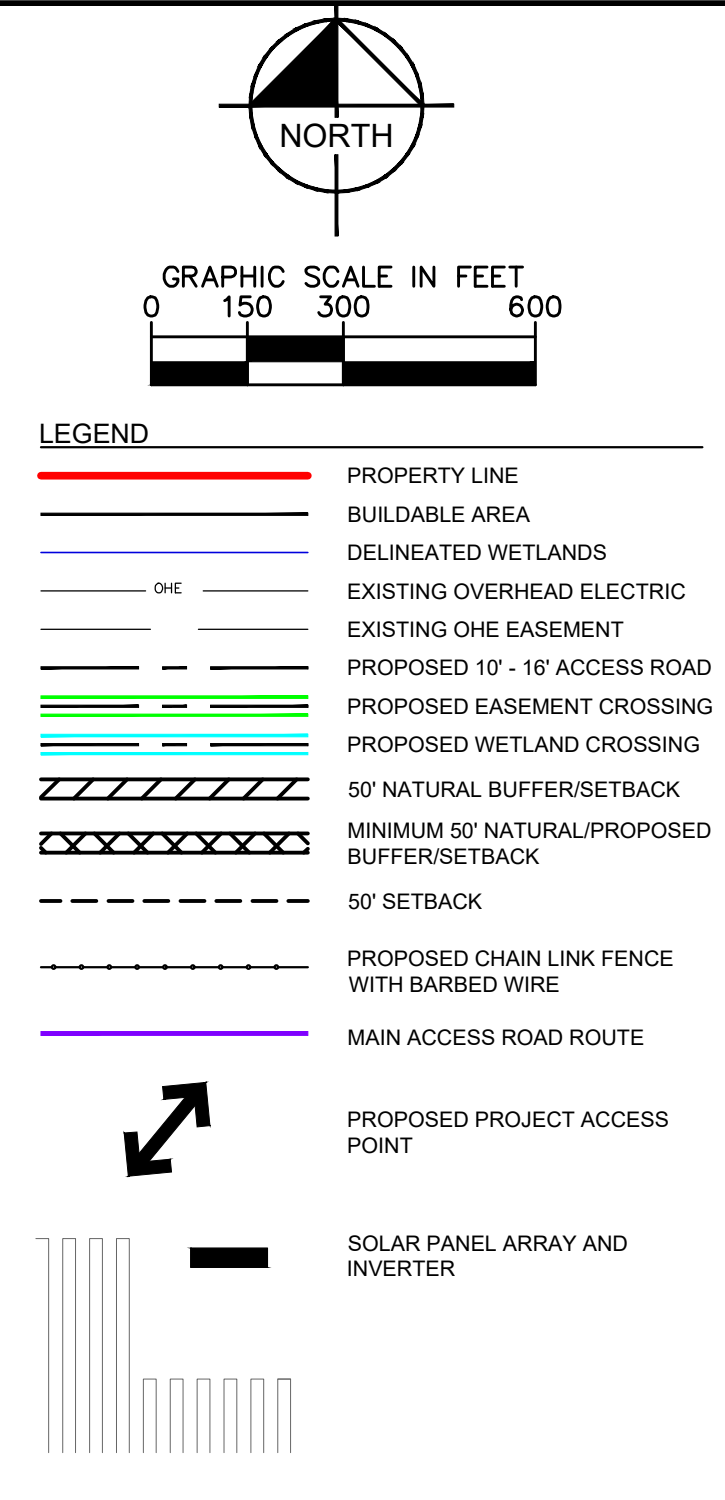


KHA PROJECT	DATE	SCALE	AS SHOWN	DESIGNED BY	JRB	DRAWN BY	JRB	CHECKED BY	SMM
116626000	10/26/2018								

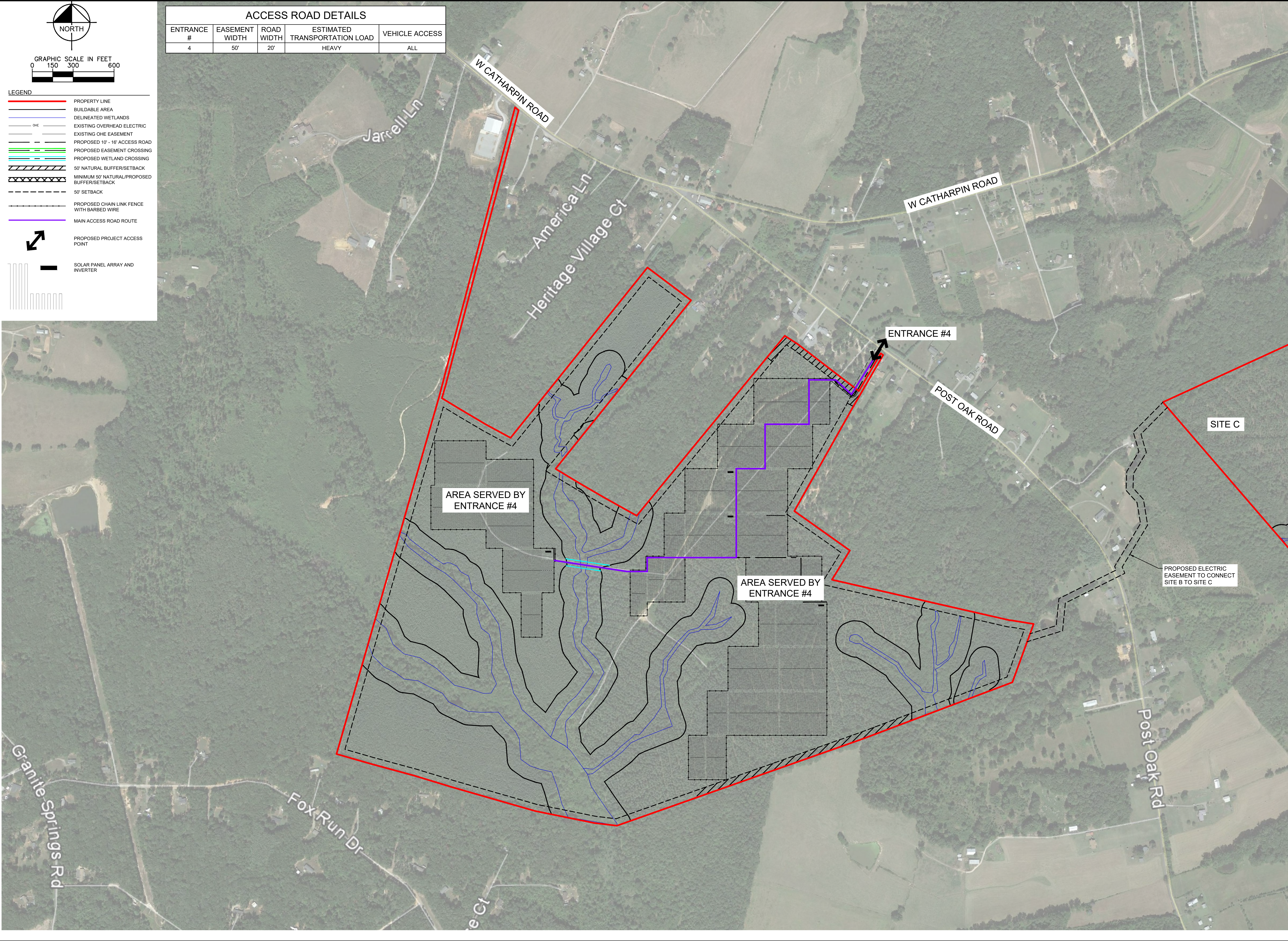
SUP 18-0002
LANDSCAPE AND BUFFER
AREA PLAN

SPOTSYLVANIA SOLAR
ENERGY CENTER B
PREPARED FOR
S-POWER

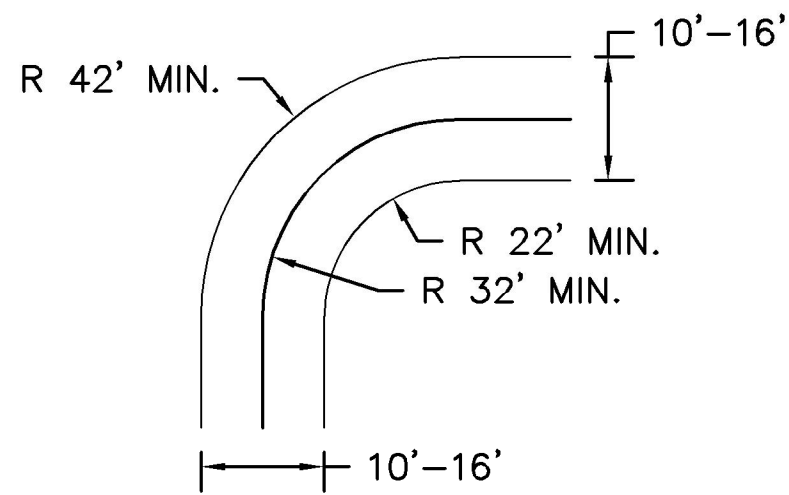
SHEET NUMBER
EX-2-3



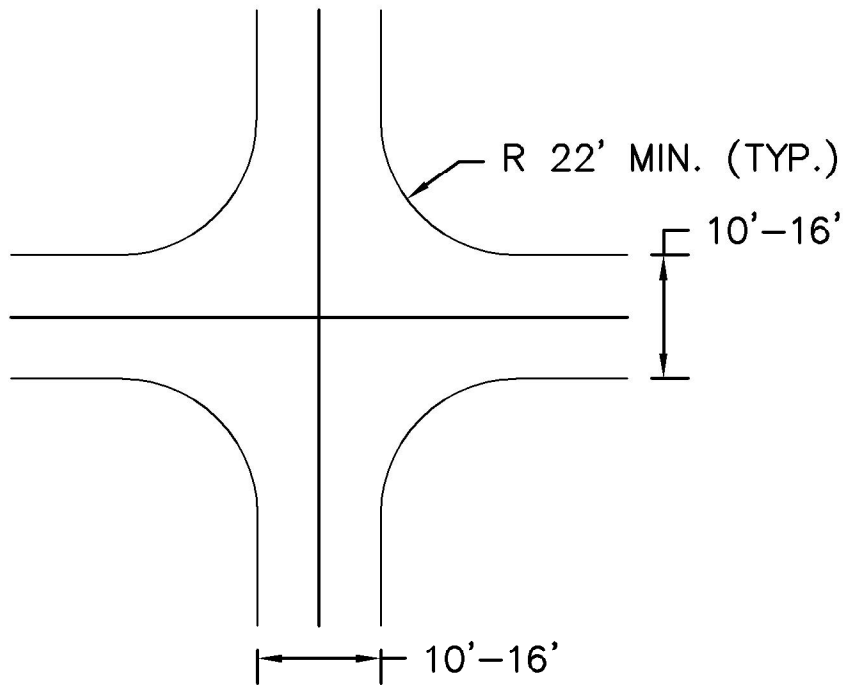
ACCESS ROAD DETAILS				
ENTRANCE #	EASEMENT WIDTH	ROAD WIDTH	ESTIMATED TRANSPORTATION LOAD	VEHICLE ACCESS
4	50'	20'	HEAVY	ALL



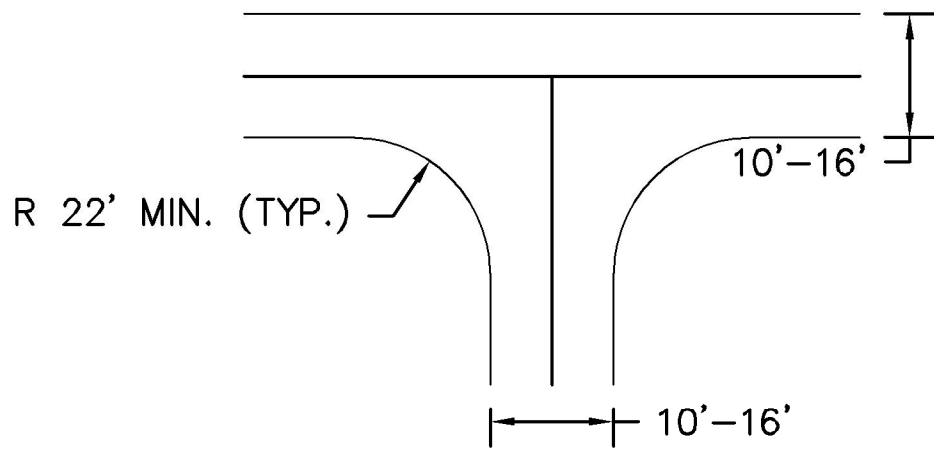
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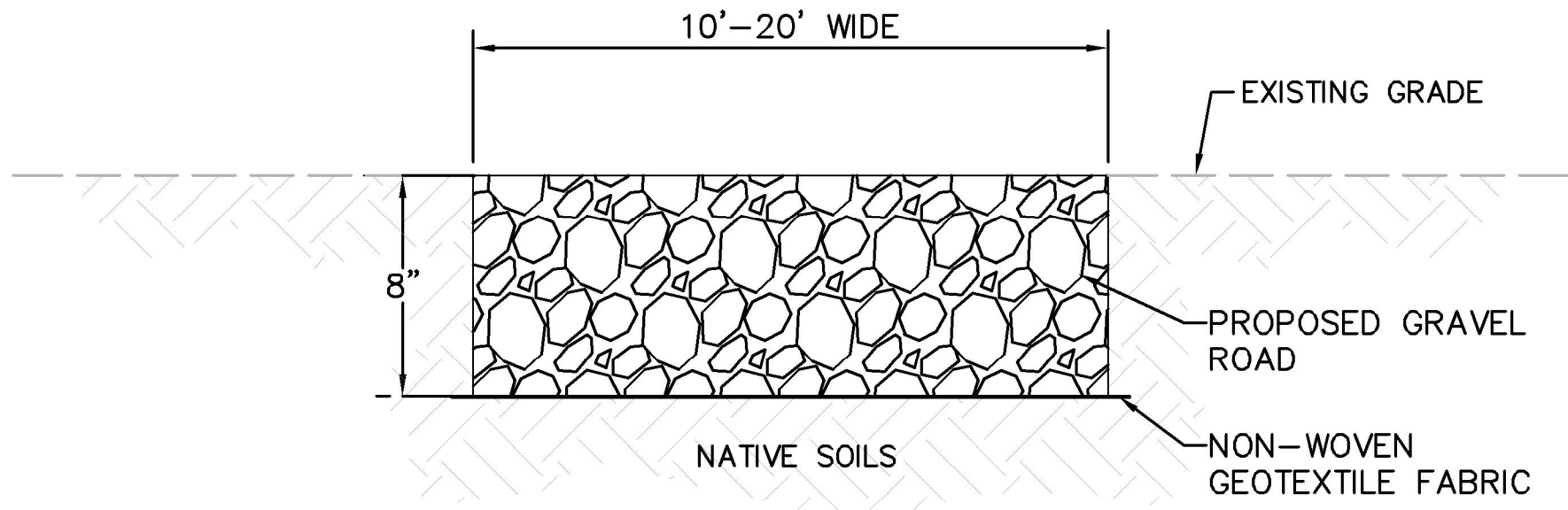
TYPICAL SITE ACCESS ROAD 90° TURN
N.T.S.



TYPICAL SITE ACCESS ROAD 4-WAY INTERSECTION
N.T.S.

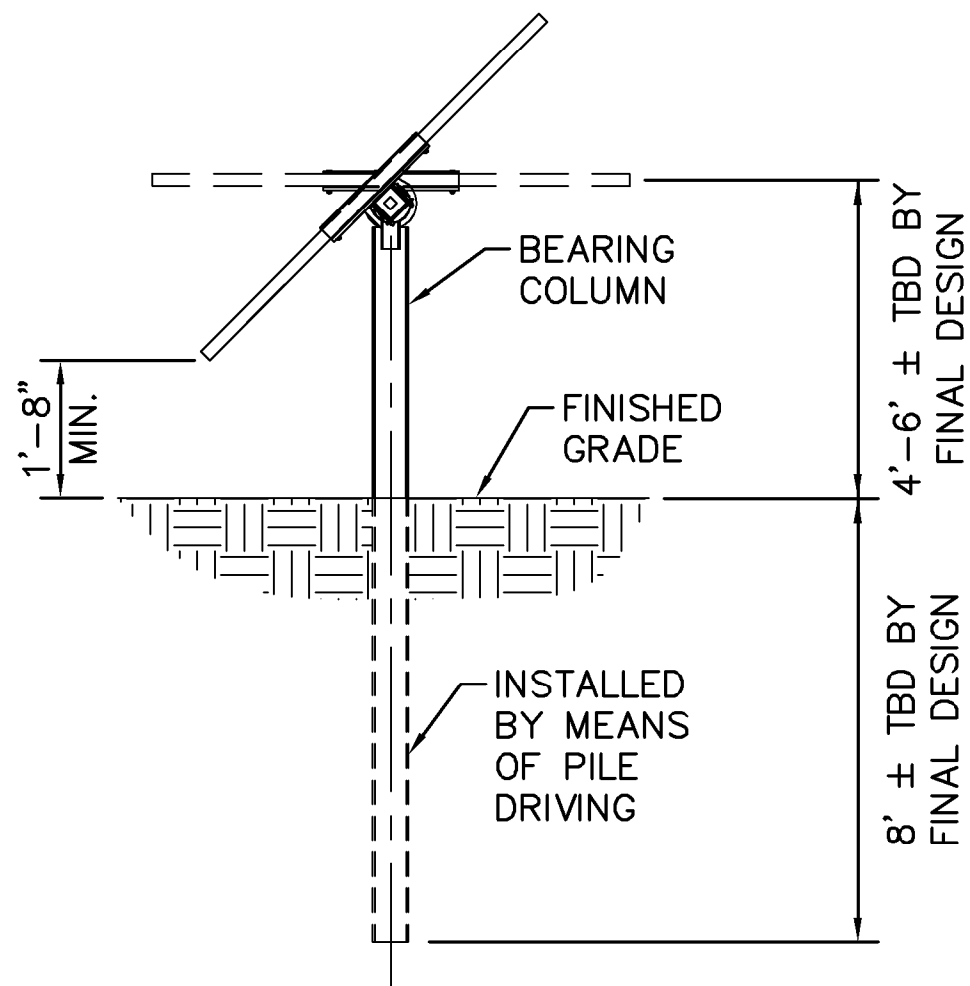


TYPICAL SITE ACCESS ROAD "T" - INTERSECTION
N.T.S.

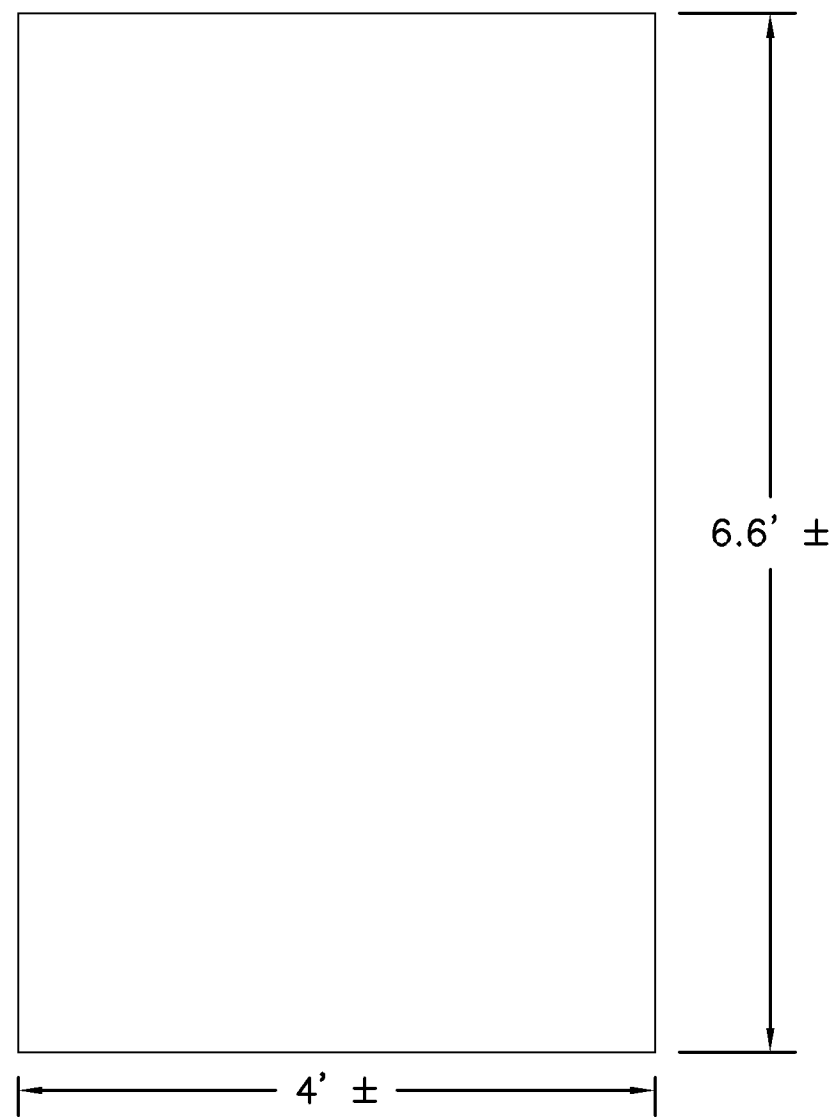


- NOTES:
1. REMOVE ALL GRASSES AND ORGANICS WITHIN ACCESS ROAD AREA.
 2. SCARIFY, MOISTURE CONDITION, AND RE-COMPACT EXISTING NATIVE SOILS TO 90% OF THE MATERIAL'S ASTM D-1557 MAXIMUM DRY DENSITY.
 3. COMPACTION SHALL BE VERIFIED BY TESTING BY THE GEOTECHNICAL CONSULTANT.

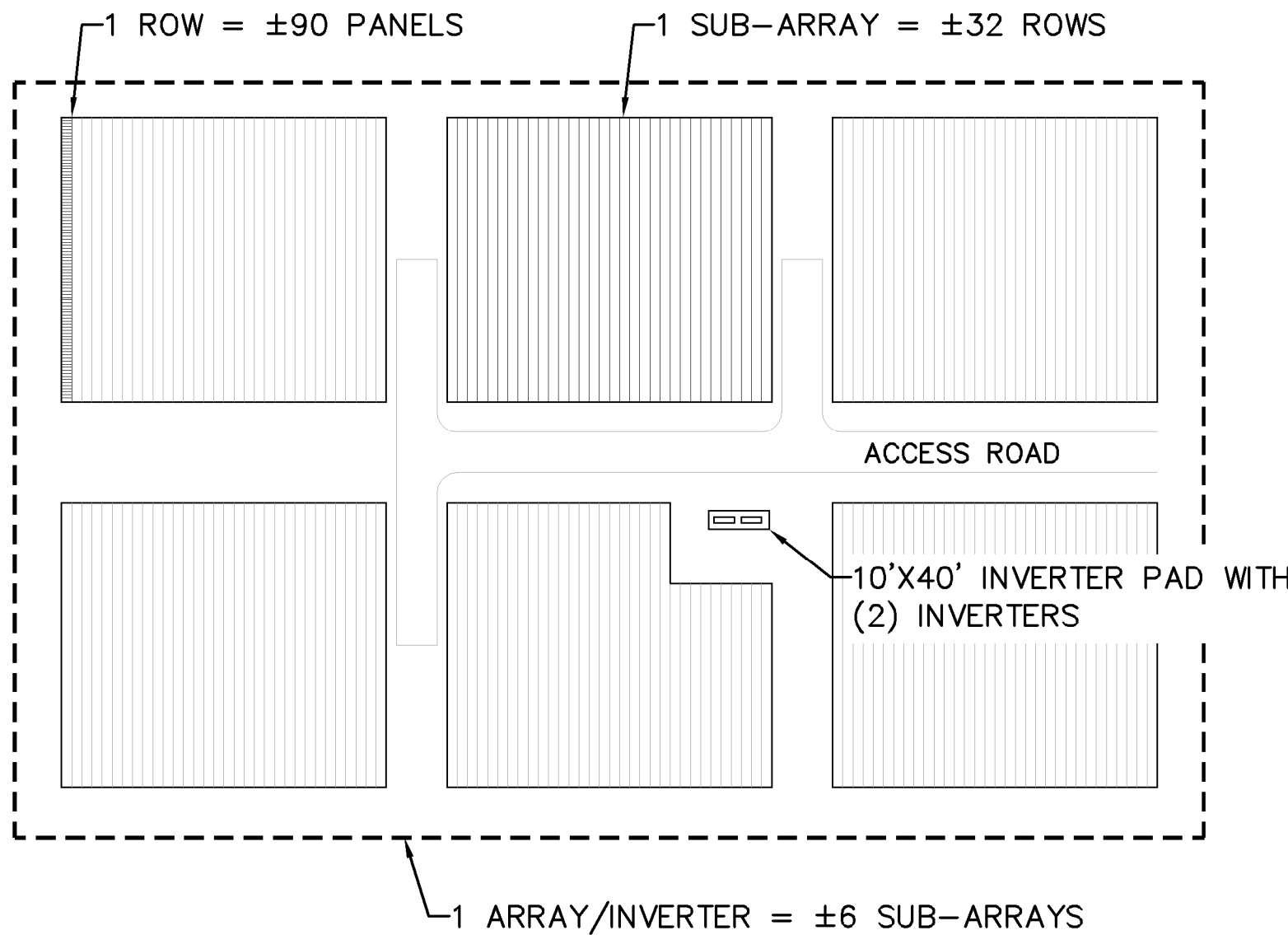
TYPICAL SITE ACCESS ROAD - GRAVEL ROAD SECTION
N.T.S.



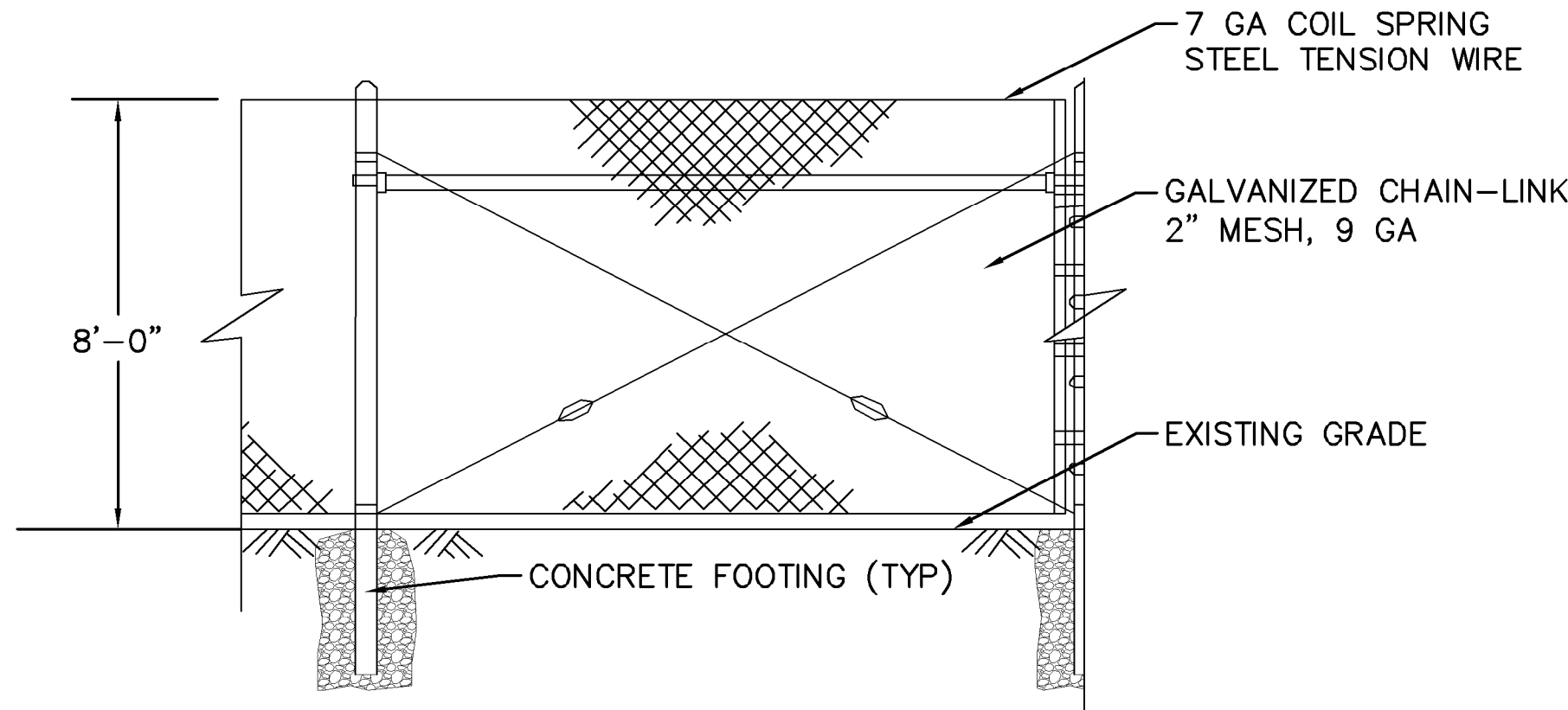
TRACKER RACK AND FOUNDATION DETAIL
N.T.S.
NOTE: ACTUAL CONSTRUCTION DETAIL OF TRACKER RACK AND FOUNDATION MAY VARY FROM THIS DETAIL.



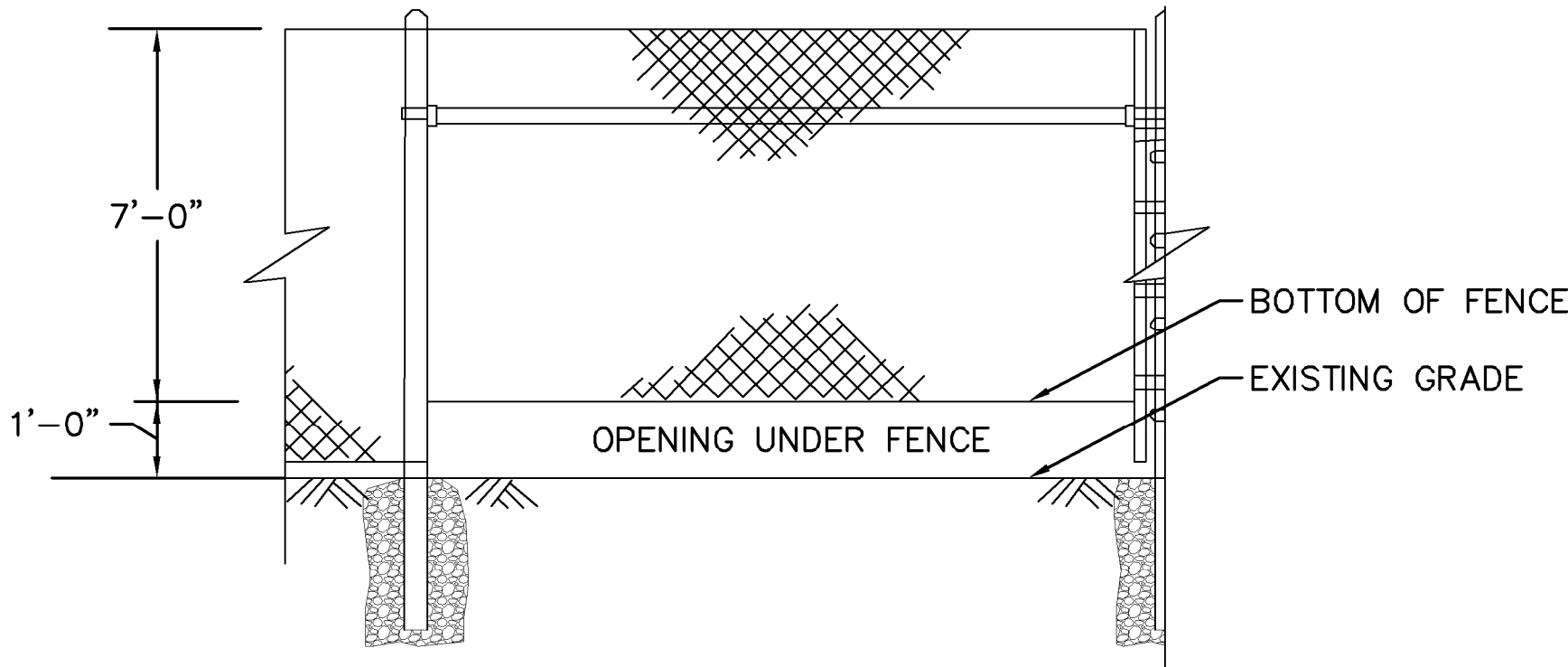
MODULE DETAIL
N.T.S.
NOTE: ACTUAL CONSTRUCTION DETAIL OF MODULE MAY VARY FROM THIS DETAIL.



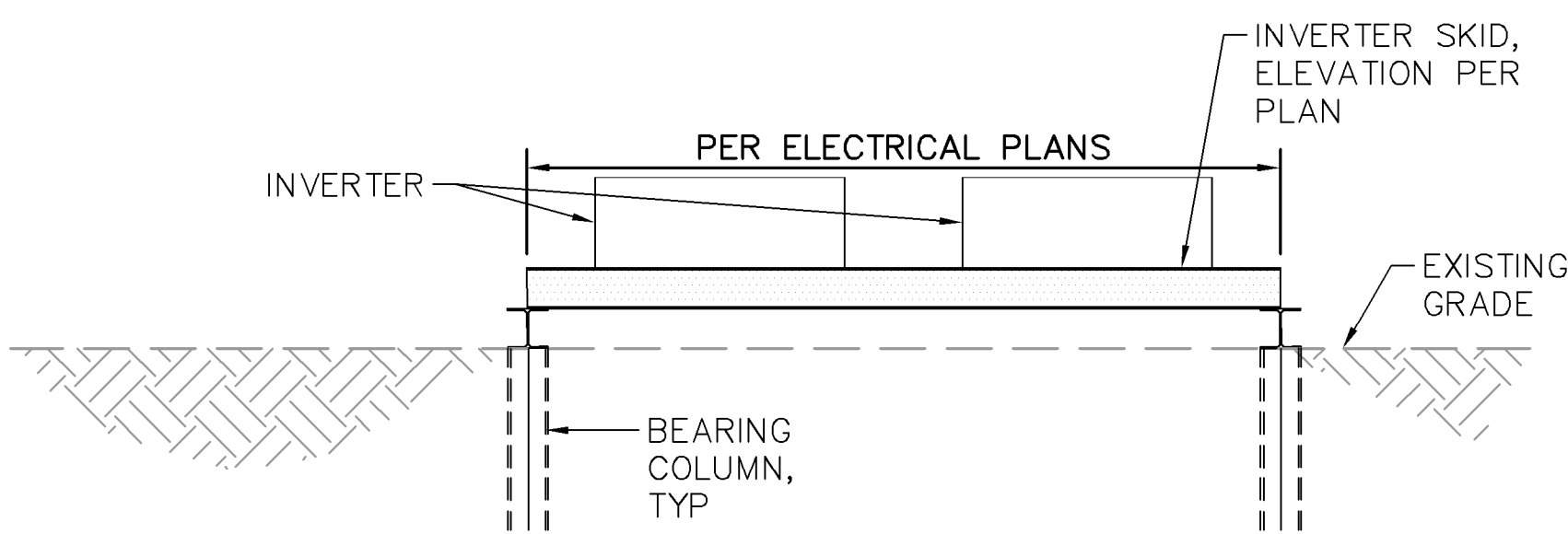
INVERTER BLOCK EXAMPLE
N.T.S.
NOTE: INVERTER PAD APPROXIMATELY 10'X40' WITH (2) 9'LX5.5'WX7.5'H INVERTERS SUBJECT TO FINAL ENGINEERING.



CHAIN LINK SECURITY FENCE
N.T.S.



WILDLIFE FENCE
N.T.S.
NOTE: WILDLIFE FENCE WILL SPACED EVERY 2000 FEET ALONG FENCE LINE SUBJECT TO ENGINEERING AND SITE DESIGN.



INVERTER DETAIL
N.T.S.
NOTE: INVERTER PAD APPROXIMATELY 10'X40' WITH (2) 9'LX5.5'WX7.5'H INVERTERS SUBJECT TO FINAL ENGINEERING.

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**Kimley-Horn**
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APPROVAL



SEAN MILLOT
Lic. No. 0402062332
11/20/2018
PROFESSIONAL ENGINEER

KHA PROJECT	116626000
DATE	11/20/2018
SCALE	AS SHOWN
DESIGNED BY	JRB
DRAWN BY	JRB
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SUP 18-0002
CIVIL DETAILS

SPOTSVYLVANIA SOLAR
ENERGY CENTER B
PREPARED FOR
S-POWER

VIRGINIA
SPOTSVYLVANIA COUNTY

SHEET NUMBER
CD-1