



REQUEST FOR BOARD ACTION

ITEM NO. 14

DATE OF MEETING: September 28, 2015

REQUESTED BY: Megan O'Hare, Senior Planner, Planning & Community Development

SHORT TITLE: Resolution Requesting Approval of a Special Use Permit (SUP) for the Construction and Operation of a Solar Farm.

BACKGROUND: Bearford Farm, LLC, applicant and owner, is requesting approval of a Special Use Permit for the construction and operation of a solar farm (NAICS 221119). The property is zoned RA, Rural Agricultural zoning district and according to the Pender County Unified Development Ordinance §5.2.3 Table of Permitted Uses; other electric power generation (NAICS 221119) is permitted via Special Use Permit. There is one (1) tract associated with this request and is located at 478 Old Savannah Road (SR 1347). The subject property may be further identified by Pender County PIN 3321-14-2767-0000.

SPECIFIC ACTION REQUESTED: To Hold a Public Hearing and Consider the Approval of a Special Use Permit for a solar farm.

PLANNING STAFF REPORT

Special Use Permit

SUMMARY:

Hearing Date: September 28, 2015

Applicant: Bearford, LLC.

Property Owner: Bearford, LLC.

Case Number: 11451

Land Use Proposed: Bearford Farm, LLC, applicant and owner, is requesting approval of a Special Use Permit for the construction and operation of a solar farm (NAICS 221119).

Property Record Number and Location: The subject property is located along the west side of US HWY 117, the north side of Old Savannah Road (SR 1347), and the south west side of Interstate 40, near the intersection of US HWY 117 and Interstate 40 in Burgaw, NC. There is one (1) tract associated with this request and is located at 478 Old Savannah Road (SR 1347). The subject property may be further identified by Pender County PIN 3321-14-2767-0000.

Zoning District of Property: The property is zoned RA, Rural Agricultural zoning district and according to the Pender County Unified Development Ordinance §5.2.3 Table of Permitted Uses; other electric power generation (NAICS 221119) is permitted via Special Use Permit.

PROJECT DESCRIPTION:

Bearford, LLC., applicant and owner, is requesting approval of a Special Use Permit for the construction and operation of a solar farm (NAICS 221119, Other Electrical Power Generation). There is one (1) tract associated with this request. The subject property is located along the west side of US HWY 117, the north side of Old Savannah Road (SR 1347), and the south west side of Interstate 40, near the intersection of US HWY 117 and Interstate 40 in Burgaw, NC and may be further identified by Pender County PIN 3321-14-2767-0000.

The subject property is zoned RA, Rural Agricultural zoning district, and according to the Pender County Unified Development Ordinance Section 5.2.3; solar farms (NAICS 221119) are permitted via Special Use Permit in the RA, Rural Agricultural zoning district.

The ± 598.07 acre subject parcel is currently occupied by agricultural uses and vacant farmland. The project proposal includes the construction of a five (5) megawatt solar power plant located on ± 33.07 acres of leased property. According to the applicant's submitted narrative, the project consists of installing glass solar panels on metal racking supported by columns driven into the ground. A construction laydown area is proposed on the southern border of the leased project area as shown on the submitted site plans. There will be three (3) to four (4) inverter and transformer assemblies constructed on 10' x 10' concrete pads. The project will connect with existing Duke Energy Progress transmission lines. The power produced on site is sold to Duke Energy via a long-term power purchase agreement.

Hours of Operation

There will be no daily staff used to operate the solar farm. Employees will visit the site on a weekly basis.

Landscape and Buffers

All landscape and buffers are to be approved in accordance with Section 8.2.8, Project Boundary Buffer of the Pender County Unified Development Ordinance. The vast majority of the existing site is covered with existing vegetation which may be sufficient for buffering, however all buffers will be examined at Site Development Plan submittal.

All commercial or uses other than residential uses (excluding industrial uses) in the Residential Districts shall provide a Buffer A along all street boundaries. A Buffer C is required along all boundaries adjacent to single family residential uses or residential lots with a parcel size of less than one (1) acre and when a single family structure is within fifty (50) feet of the boundary of the development. A Buffer B is required along all other non-street boundaries (Attachment 1).

Driveway Access

The applicant is showing direct access to US HWY 117 and is subject to review and approval by the NCDOT through a driveway permit which may be required at the Site Development Plan submittal.

Utilities

The proposed project does not include any water or sewer services.

Solar Farm Considerations

At the point of which the project is no longer operational for 12 months, considerations shall be made for disassembling and dismantling the equipment to ensure the site is vacant. This is accomplished through a Decommissioning Plan. If the site ceases to produce energy on a continuous basis for 12 months, it will be considered abandoned unless the current responsible party (or parties) with ownership interest provides substantial evidence (updated every 6 months after 12 months of no energy production) to the Zoning Administrator of the intent to maintain and reinstate the operation of that facility.

Removal shall be considered for all non-utility owned equipment, conduit, structures, fencing, roads and foundations. Such can be captured in a Decommissioning Plan recorded within the Pender County Register of Deeds prior to final electrical inspection of the facility. If the responsible party (or parties) fails to comply, the Zoning Administrator may remove the equipment from the site, sell any removed materials, and initiate judicial proceedings or take any other steps legally authorized against the responsible parties to recover the costs required to remove the facility and restore the site to a non-hazardous condition.

The project bounds shall be fenced to ensure the health, safety and well-being of the site and the surrounding community. Fencing the project is submitted for six (6) feet in height with barbed wire.

Prior to the issuance of final zoning approval, a site development plan must be submitted and approved in accordance with applicable provisions of the Pender County Unified Development Ordinance. In addition, all other applicable permits and approvals must be obtained including inspections and health department regulation compliance.

Use Type	Ref NAICS	Zoning Districts									
		RA	RP	RM	MH	PD	GB	OI	IT	GI	EC
MISCELLANEOUS USES											
Other Electrical Power Generation	221119	S	S			S			P	P	

EVALUATION:

- A. *Public Notifications:*** Advertisements for the proposal have been placed in the *Pender-Topsail Post & Voice*. Adjacent property owners were notified by first class mail; as well as a sign advertising the public hearing was placed on the subject property.
- B. *Basis for Granting SUP:*** See Attachment A for approval procedures (§3.12.3 of Unified Development Ordinance) and revocation procedures (§3.12.4 of Unified Development Ordinance).
- C. *Unified Development Ordinance Compliance:*** The property is currently zoned RA, Rural Agricultural, and according to the Pender County Unified Development Ordinance §5.2.3 Table of Permitted Uses; solar farms are permitted via Special Use Permit in the RA, Rural Agricultural zoning district.
- D. *2010 Comprehensive Land Use Plan Compliance:*** The subject property is classified as Rural Growth and Suburban Growth in the *2010 Comprehensive Land Use Plan*.

The Rural Growth land use classification defines those areas of Pender County where urban services, i.e., public water and sewer services, are not expected to be extended within the planning horizon. Rural Growth areas are where preservation of agricultural operations is a primary concern and where conflicts between agricultural and non-agricultural uses are to be discouraged. Rural Growth areas are intended to protect agricultural and forestry operations that are a major part of the County's economic base and that are key to preservation of the County's rural landscape. Major job-creating activities that are compatible with farms, forestry and very low-density development are appropriate.

The Suburban Growth land use classification identifies those areas of Pender County where significant residential growth is expected to occur within the planning horizon. Areas designated as Suburban Growth are located primarily adjacent to municipal planning jurisdictions and within or near high growth, unincorporated areas of the County, i.e., Hampstead/Scotts Hill, Rocky Point, and portions of US 421 South. Suburban Growth designates areas where public water and public sewer are available or are planned in the near future.

- a. The SUP request may be supported by policies within the *2010 Comprehensive Land Use Plan*:
- i. *Policy 1A.1.5 -The County supports a pro-business/pro-growth attitude, balanced by a concern for preserving the natural assets and quality of life factors that make the area attractive to visitors and permanent residents alike*
 - ii. *Policy 8A.1.5 Encourage alternative energy development as a viable land use and standards, as necessary, to ensure minimal impact on surrounding land uses*

This SUP request does not conflict with any goals and policies in the 2010 Pender County Comprehensive Land Use Plan.

- E. *Existing Land Use in Area:*** The subject parcel is bordered by low density residential properties and a church to the south, as well as agricultural farm land to the west.
- F. *Site Access Conditions:*** The applicant is showing direct access to US HWY 117 and is subject to review and approval by the NCDOT through a driveway permit which may be required at the Site Development Plan submittal.
- G. *Conditions To Consider In Issuing the Special Use Permit For This Project:***
1. The project shall comply with all requirements of the Pender County Unified Developed Ordinance.

2. Any violations of the conditions of this permit, confirmed by the Zoning Administrator shall result in this permit becoming void, if not corrected within 30 days of receipt of the notice of violation.
3. The applicant shall meet all other local, state and federal regulations.
4. The obligations imposed by this permit will be the responsibility of the property owner and operator and shall continue in affect for the duration of this permit.
5. The facility must be fenced surrounding the entire project bounds.
6. A Decommissioning Plan shall be recorded within the Pender County Register of Deeds. The plan shall identify and establish procedures for removal of equipment, conduit, structures, fencing, roads, and foundations.
7. A site that ceases to produce energy on a continuous basis for 12 months will be considered abandoned unless the current responsible party (or parties) with ownership interest provides substantial evidence (updated every 6 months after 12 months of no energy production) to the Zoning Administrator of the intent to maintain and reinstate the operation of that facility. Upon determination of abandonment, the Zoning Administrator shall notify the party (or parties) responsible they must remove the facility and restore the site to its condition prior to development of the site within three hundred and sixty (360) days of notice by the Zoning Administrator.
8. If the responsible party (or parties) fails to comply, the Zoning Administrator may remove the equipment from the site, sell any removed materials, and initiate judicial proceedings or take any other steps legally authorized against the responsible parties to recover the costs required to remove the facility and restore the site to a non-hazardous condition.

Attachment A

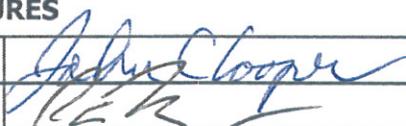
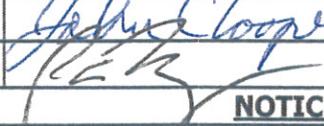
3.12.3 Procedures for Reviewing Applications

- A. The special uses, as specified in the various districts, may be established only after review and approval by the Board of Commissioners.
- B. The Board of County Commissioners, acting in a quasi-judicial manner and setting, shall hear evidence from the applicant and any interested members of the public.
- C. The Board of Commissioners shall hold a public hearing on the application for a Special Use Permit within sixty (60) days after the completed application is filed.
- D. The Administrator shall cause notice of the hearing to be published once a week for two successive calendar weeks. The notice shall be published for the first time not less than ten (10) nor more than twenty-five (25) days before the date fixed for the hearing.
- E. All Special Use Permit applications must be presented to the Administrator for a determination of completeness.
- F. An appeal from a completeness determination may be made to the Board of Adjustment within twenty (20) days of the determination.
- G. The Board of Commissioners shall approve, modify, or deny the application for a Special Use Permit. In approving a Special Use Permit, the Board of Commissioners, with due regard to the nature and state of all adjacent structures and uses in the district within same is located, shall make written findings that the following are fulfilled:
 - 1. The use requested is listed among the special uses in the district for which application is made, or is similar in character to those listed in that district;
 - 2. The requested use will not impair the integrity or character of the surrounding or adjoining districts, nor adversely affect the safety, health, morals, or welfare of the community or of the immediate neighbors of the property;
 - 3. The proposed use shall not constitute a nuisance or hazard;
 - 4. The requested use will be in conformity with the Pender County Land Use Plan and other official plans or policies adopted by the Board of County Commissioners;
 - 5. Adequate utilities, access roads, drainage, sanitation or other necessary facilities have been or are being provided;
 - 6. That adequate measures have been or will be taken to provide ingress and egress so designed as to minimize the traffic congestion in the public roads;
 - 7. That the special use shall, in all other respects, conform to the applicable regulations of the district in which it is located; and
 - 8. The proposed use shall not adversely affect surrounding uses and shall be placed on a lot of sufficient size to satisfy the space requirements of said use.

3.12.4 General Provisions Concerning Special Use Permits

- B. Revocation - In any case where the Special Use Permit or the conditions of a Special Use Permit have not been or are not being complied with, the Administrator may initiate a notice of violation for the provisions of this ordinance and the conditions of the Special Use Permit not in compliance or the Administrator, may initiate notice of a public hearing to consider revocation of the permit by the Board of Commissioners or both actions may be initiated. Procedures for notice of such hearing shall be the same as procedures for consideration of an initial application for a Special Use Permit and the permittee shall be notified.

APPLICATION FOR SPECIAL USE PERMIT

THIS SECTION FOR OFFICE USE			
Application No.	SUP 11451	Date	8-13-15
Application Fee	\$ 630.00	Receipt No.	152071
Pre-Application Conference	7-15-15	Hearing Date	9-28-15
SECTION 1: APPLICANT INFORMATION			
Applicant's Name:	Bearford Farm, LLC	Owner's Name:	Bearford, LLC (Attn: John Cooper)
Applicant's Address:	804 Meeting Street	Owner's Address:	4429 South US 117
City, State, & Zip	Charleston, SC 29403	City, State, & Zip	Rose Hill, NC 28458
Phone Number:	843 277 2090	Phone Number:	910-284-1679
Legal relationship of applicant to land owner: Lessor			
SECTION 2: PROJECT INFORMATION			
Property Identification Number (PIN):	3321-14-2767-0000	Total property acreage:	598.07
Zoning Classification:	RA	Acreage to be disturbed:	32.81
Project Address :	478 Old Savannah Road Willard, NC 28478		NAICS Code: 221114
Description of Project Location:	At the intersection of US 117 and I40		
	West of US 117 and south of I40		
Describe activities to be undertaken on project site:	Construct a utility scale (5MW) solar photovoltaic electric generating facility		
SECTION 3: SIGNATURES			
Applicant's Signature		Date:	8/13
Owner's Signature		Date:	8/13
NOTICE TO APPLICANT			
<ol style="list-style-type: none"> 1. Applicant must also submit the information described on the Special Use Checklist. 2. Applicant or agent authorized in writing must attend the public hearing. 3. Once the public hearing has been advertised, the case will be heard unless the applicant withdraws the application or unless the Board of Commissioners or other authorized person agrees to table or delay the hearing. 4. Applicant may wish to review the required findings for approval of a Special Use Permit found on page 1 of this application 5. Permit will become void after 12 months if a final zoning permit is not obtained, unless specifically requested at the time of public hearing. 			

Office Use Only					
<input checked="" type="checkbox"/> General/ Fees: \$300 +\$10 per acre over 5 acres, Max. of \$5,000 <input type="checkbox"/> Tower over 75 Feet/ Fees \$500 <input type="checkbox"/> Minor Revisions / Fees \$100 <input type="checkbox"/> Mining Fees \$750			Total Fee Calculation: \$ 630.00 Application#: 11451 Date of Hearing: 9-28-15		
Attachments Included with Application: (Please include # of copies)					
CD /other digital version	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	Plan Sets	# of large 2	# of 11X17 20	Other documents/Reports
Payment Method: <input type="checkbox"/> Cash : \$ _____ <input type="checkbox"/> Credit Card: <input type="checkbox"/> Master Card <input type="checkbox"/> Visa		<input checked="" type="checkbox"/> Check: # 2751			
Application received by:		<i>Pat O'Neil</i>			Date: 8-13-15
Application completeness approved by:		<i>Pat O'Neil</i>			Date: 8-14-15

Special Use Permit Checklist

<input checked="" type="checkbox"/>	Signed Application Form (Both Applicant and Owner)
<input checked="" type="checkbox"/>	Application fee
<input checked="" type="checkbox"/>	Legible list of all property owners adjacent to the property upon which the use is to be located. The list shall include the mailing address & physical address of these property owners (The application will not be advertised for public hearing until the list is accurate & complete
<input checked="" type="checkbox"/>	One business size envelope legibly addressed with first class postage for each of the adjacent property owners on the above list.
<input checked="" type="checkbox"/>	Project Narrative --Written description of the project (max of 3 pages) including the following: <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Location of the project and type of access to project site <input checked="" type="checkbox"/> Detailed description of the activities to be undertaken on the site, including hrs. of operation, # of employees, etc. <input checked="" type="checkbox"/> Description of all construction activities to be undertaken on the site <input checked="" type="checkbox"/> Describe type of utilities that will serve project and status of approval from applicable providers <input checked="" type="checkbox"/> List of all state and federal permits that will be required for the project <input checked="" type="checkbox"/> Applicant <u>must specifically address the 8 written findings</u> for Special Use Permit approval which are identified on page 1 of this application and in the Pender County Unified Development Ordinance (Section 3.12.3.G.). Describe any potential impacts the project will have on the community or adjacent properties such as traffic, noise, etc. and explain efforts to mitigate these impacts. The applicant may also wish to describe any positive benefits the project will provide for the community and/or neighbors of the project.
<input checked="" type="checkbox"/>	Project Map(s) --Map or maps of the special use project site with boundaries of the project if less than the parcel boundaries. This map or maps shall be drawn to a <u>readable</u> scale. The scale shall be not more than 200' to the inch. The map shall display an accurate bar graph scale, date prepared, north arrow and the author of the map. This map(s) shall show the following: <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Boundaries of the property upon which the special use will be located, the acreage in the property and project site, with a north arrow and bar graph. <input checked="" type="checkbox"/> Access from the site and/or project boundaries to the nearest publicly maintained road. <input checked="" type="checkbox"/> Location of any existing structures or uses on the property and within 50' of the property. <input checked="" type="checkbox"/> Location of the project boundaries if they do not coincide with the property boundaries. <input checked="" type="checkbox"/> Existing and proposed structures, other on-site improvements, and location of all activities associated with the use, location of well, septic tank, and/or other utilities. <input checked="" type="checkbox"/> Boundary of all clearing, grading, and/or land disturbing activities on the site and the calculated acreage of all land disturbing activities on the site. <input checked="" type="checkbox"/> Parking, loading areas, and access to the project (See Article 7, Pender County UDO) <input checked="" type="checkbox"/> Landscaping and buffering (See Article 8, Pender County UDO) <input checked="" type="checkbox"/> All signs to be located on the property (See Article 10, Pender County UDO) <input checked="" type="checkbox"/> Pedestrian walks, area lighting and flood lighting. <input checked="" type="checkbox"/> Existing natural features of the site including, wooded areas, tree lines, ponds, streams, other water bodies or ditches on or adjacent to the site, designated flood hazard areas & known or designated wetlands on the site. <input checked="" type="checkbox"/> Drainage plan and/or direction of flow of runoff from the project and site. <input checked="" type="checkbox"/> After review by the Planning and Community Development Department, additional information may be required to be submitted. <input checked="" type="checkbox"/> Two full size and twenty reduced size (max. 11"x17") copies of this map(s) shall be submitted.
RETURN COMPLETED APPLICATION TO: Pender County Planning & Community Development P.O. Box 1519 Burgaw, NC 28425	

Print Form

Bearford Farm, LLC Solar Electric Farm
Special Use Permit Addendum
Narrative of Proposed Use
Findings of Fact Submittal

Narrative of Proposed Use

Location of the Project and Type of Access to Project Site

Strata Solar proposes to build a 5MW solar electric power plant at 478 Old Savannah Road, Burgaw, North Carolina. Access to the project site will be from an access road off of US 117.

Detailed Description of the Activities to be Undertaken on the Site

The proposed solar farm is a truly passive use. The solar farm will not be staffed daily, and employees will visit the site weekly or less frequently. The proposed plant requires no public improvements or services and will result in less traffic than is generated by one single family home.

Description of All Construction Activities to be Undertaken on the Site

The project includes glass solar panels mounted on metal racking with columns driven into the ground. There are also 3-4 inverter and transformer assemblies on 10'x10' concrete pads. The project will interconnect with existing local distribution lines owned by Duke Energy Progress.

Description of the Types of Utilities That Will Serve the Project and Status

Solar facilities do not require any additional drainage, water, or sanitation facilities.

List of State and Federal Permits Required for the Project

Strata Solar filed an application for a Certificate of Public Convenience and Necessity ("CPCN") and Registration of New Renewable Energy Facility for the proposed solar farm. This filing is required under State law before construction of an electric generating facility of this size can begin. The Commission issued an Order issuing the CPCN and accepting the registration of the proposed solar farm as a new renewable energy facility. A copy of the Order is attached as **Exhibit A**.

A DOT driveway permit will be obtained to provide access to the site off of US 117. In addition, a sediment and erosion control plan will be approved by the NC Department of Environment and Natural Resources prior to beginning construction.

There are no federal permits required for this project.

General Considerations

It is the public policy of the State to promote renewable energy. Under State law, electric utilities are required to purchase an increasing amount of renewable energy. Under the law, solar energy is defined as a renewable energy resource.

The proposed solar electric power plant would generate electricity to meet consumer needs in the local area with safe, clean, renewable energy with no fuel consumption, emissions, noise, traffic,

or hazardous materials. The power generated is sold to Duke Energy Progress under a long-term power purchase agreement.

Strata Solar maintains an average of 1,650 jobs across North Carolina including 150 professional engineering, project management, legal and accounting staff in Chatham County and 1,500 construction jobs across the state.

Findings of Fact

- 1. The Board must find that “[t]he use requested is listed among the special uses in the district for which application is made, or is similar in character to those listed in that district.”**

Solar farms are an allowed special use in the RA district as an “Other Electric Power Generation.” The 2007 NAICS definition for 221119 Other Electric Power Generation lists “Electric power generation, solar” as one of the allowed operations under this classification. Additionally, the use is less impactful than other allowed special uses in the RA district, such as nonmetallic mineral mining and quarrying and electric bulk power transmission and control.

- 2. The Board must find that “[t]he requested use will not impair the integrity or character of the surrounding or adjoining districts, nor adversely affect the safety, health, morals, or welfare of the community or of the immediate neighbors of the property.”**

The solar facility will not impair the integrity or character of the surrounding or adjoining districts, nor adversely affect the safety, health, morals, or welfare of the community or neighbors.

The plant is constructed to the National Electric Code and all equipment is listed with Underwriters Laboratories. The equipment also meets numerous additional safety and quality certifications. There are no emissions or polluted runoff. There are no hazardous materials. Surrounding the facility will be a six-foot chain-link fence with three strands of barbed wire along the top designed to prevent unauthorized access to the facility.

- 3. The Board must find that “[t]he proposed use shall not constitute a nuisance or hazard.”**

The proposed solar plant is virtually silent. There would be three or four inverter and transformer combinations in the interior of the plant that generate a low hum that declines in volume with distance, so as to be nearly inaudible at the perimeter of the plant.

- 4. The Board must find that “[t]he requested use will be in conformity with the Pender County Land Use Plan and other official plans or policies adopted by the Board of County Commissioners.”**

The use is in conformity with the Pender County Land Use Plan and other official plans or policies adopted by the Board of County Commissioners. The proposed use is on the

edge of a Suburban Growth area and is surrounded by a Rural Growth area. The Suburban Growth and Rural Growth areas allow non-residential uses in areas meeting locational criteria, which includes "frontage and access to a major State highway or secondary road, location at a major intersection, proximity to similar uses, and spatial separation from non-compatible uses such as existing residential development." Pender County Land Use Plan, Sec. III, pgs. 2-3. The proposed solar farm fronts and has access to US Highway 117 and is near the intersection with Interstate 40. It is in proximity to other similar uses and has spatial separation from non-compatible uses.

5. **The Board must find that "[a]dequate facilities, access roads, drainage, sanitation or other necessary facilities have been or are being provided."**

There will be adequate facilities, access roads, drainage, sanitation, and other necessary facilities provided to the solar facility. There will be an access road to the facility constructed pursuant to a DOT driveway permit. Solar facilities do not require any additional drainage, water, or sanitation facilities.

6. **The Board must find "[t]hat adequate measures have been or will be taken to provide ingress and egress so designed as to minimize the traffic congestion in the public roads."**

There will be very little traffic due to the solar facility. There are no full-time employees who work at the facility. The solar farm will not be staffed daily, and employees will visit the site weekly or less frequently. The solar farm will result in less traffic than is generated by one single family home.

7. **The Board must find "[t]hat the special use shall, in all other respects, conform to the applicable regulations of the district in which it is located."**

The solar facility will conform to the regulations set out for the RA district, including meeting the dimensional standards set forth in Section 4.4 of the Pender County UDO.

8. **The Board must find that "[t]he proposed use shall not adversely affect surrounding uses and shall be placed on a lot of sufficient size to satisfy the space requirements of said use."**

The solar facility will not adversely affect surrounding uses and will be placed on a lot that is sufficiently large. The solar facility will disturb approximately 32.81 acres of a 598.07 acre parcel and will not substantially injure the value of adjoining or abutting property.

8.2.4 Prohibited Use of Buffer Area

A buffer area shall not be used for any building or use, accessory building or use, parking or loading area, storage area, or other principal or accessory uses except as specifically permitted in this Ordinance.

8.2.5 Planting in Easements

- A. Where required plantings are located in easements, the property owner shall be responsible for replacement of such required vegetation if maintenance or other utility requirements require their removal.
- B. No trees shall be planted in wet retention ponds, drainage maintenance easement, or any utility maintenance easements.
- C. Shrubs may be planted within easements, provided they are only within the outer three feet of the easement. No new trees may be planted in an easement.
- D. Existing trees may remain in dry retention ponds provided that the natural grade is undisturbed to the tree line, they are a species adapted to seasonal flooding and the pond is adequately maintained.

8.2.6 Buffer Descriptions and Options

The following descriptions list the specifications of each buffer. The requirements reflect the minimum and the developer may increase the buffer at his/her option. Buffer requirements are stated in terms of width of the buffer and the number of plant units required per one hundred (100) linear feet of buffer. The requirements of a buffer may be satisfied by any of the options under each letter designation or existing equivalent vegetation. All mathematical rounding shall be upward and shall be applied to the total amount of plant material required in the buffer, not to each one hundred (100) foot length. The required canopy and understory trees shall generally be spread uniformly along the buffer. Shrubs may be clustered when a 98% grass cover is provided in all areas of the buffer other than within 4 ft. of the base of any tree or shrub.

Buffer A

Buffer "A" This buffer is designed primarily for road frontage areas and should run parallel to the street to provide a continuous, aesthetically pleasing streetscape. The requirements for buffer "A" shall be met by any one of the following:
A-1) 15 foot wide strip with 3 canopy trees, 2 understory trees and a grass cover of at least 98 % coverage (except within 4 feet of the base of any tree), per 100 linear feet (width may be reduced to 10' for existing developed lots that are subject to new buffer requirements), or
A-2) 20 foot wide strip with 3 canopy trees, 2 understory trees and either a grass cover of at least 98 % coverage (except within 4 feet of the base of any tree or shrub) or 18 shrubs per 100 linear feet, or
A-3) 25 foot wide strip with 1 canopy tree, 2 understory trees and either a grass cover of at least 98 % coverage (except within 4 feet of the base of any tree or shrub) or 21 shrubs per 100 linear feet, or
A-4) 30 foot wide strip with 1 canopy tree, 2 understory trees and either a grass or other approved vegetative ground cover of at least 98 % coverage (except within 4 feet of the base of any tree or shrub) or 32 shrubs per 100 linear feet.

Buffer B

Buffer "B" This buffer is a medium density planting area to be used primarily along non street boundary lines to provide spatial separation between similar types of uses. The requirements for buffer "B" shall be met by any one of the following:
B-1) 10 foot wide strip with 3 canopy trees, 4 understory trees and a grass cover of at least 98 % coverage (except within 4 feet of the base of any tree), per 100 linear feet, or
B-2) 15 foot wide strip with 3 canopy tree, 2 understory trees and a grass cover of at least 98 % coverage (except within 4 feet of the base of any tree), per 100 linear feet, or
B-3) 20 foot wide strip with 1 canopy tree, 2 understory tree and either a grass cover of at least 98 % coverage (except within 4 feet of the base of any tree or shrub) or 15 shrubs per 100 linear feet, or
B-4) 25 foot wide strip with 0 canopy trees, 5 understory trees and either a grass cover of at least 98 % coverage (except within 4 feet of the base of any tree or shrub) or 21 shrubs per 100 linear feet.

Buffer C

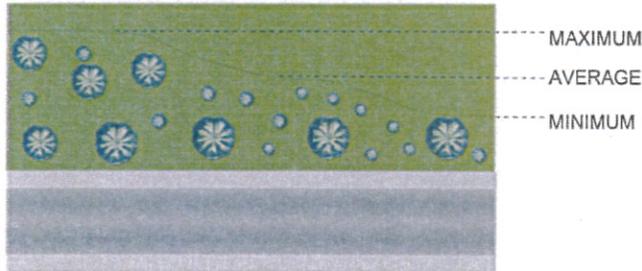
Buffer "C" This buffer is designed to provide a high density screen primarily along non street boundary lines to provide buffer and separation between different categories of uses such as commercial adjacent to residential uses or other non-residential uses adjacent to high density single family residential uses. The requirements for buffer "C" shall be met by any one of the following:
C-1) 10 foot wide strip with a 6 foot high wood stockade, basket weave, or other solid wood fence and 2 canopy trees and a grass cover of at least 98 % coverage (except within 4 feet of the base of any tree), per 100 linear feet, or
C-2) 15 foot wide strip with a 6 foot high wood stockade, basket weave, or other solid wood fence or an evergreen hedge* that will provide a continuous screen at least 6' high within 4 years and 1 canopy tree, 4 understory trees and a grass cover of at least 98 % coverage (except within 4 feet of the base of any tree), per 100 linear feet, or *Reference spacing requirements in plant list for specific species and spacing to achieve evergreen hedge
C-3) 20 foot wide strip with an evergreen hedge that will provide a continuous screen at least 6' high within 4 years and 1 canopy tree or 3 understory trees and a grass cover of at least 98 % coverage (except within 4 feet of the base of any tree), per 100 linear feet, or
C-4) 25 foot wide strip with an evergreen hedge that will provide a continuous screen at least 6' high within 4 years, 2 understory trees and a grass cover of at least 98 % coverage (except within 4 feet of the base of any tree), per 100 linear feet.

Buffer D

Buffer "D" This buffer is a low density planting area to be used along boundary lines in rural areas between large lots or tracts with substantial buffer width and setbacks to provide spatial separation between uses that are developed at very low density. The requirements for buffer "D" shall be met by any one of the following:
D-1) 15 foot wide strip with 3 canopy trees and a grass or other approved vegetative ground cover of at least 98 % coverage (except within 4 feet of the base of any tree) per 100 linear feet, or
D-2) 20 foot wide strip with 2 canopy trees, 2 understory trees and a grass or other approved vegetative ground cover of at least 98 % coverage (except within 4 feet of the base of any tree) per 100 linear feet, or
D-3) 25 foot wide strip with 1 canopy tree, 3 understory trees and a grass or other approved vegetative ground cover of at least 98 % coverage (except within 4 feet of the base of any tree) per 100 linear feet.

8.2.7 Buffer Depth Averaging

While the buffer depth is normally calculated as parallel to the property line, design variations are allowed and are calculated on the average depth of the buffer per 100 feet of linear width measured along the property line. Minimum depth of buffer in any case shall not be less than 50% the required depth of the buffer chosen. Maximum depth shall not be more than 150% the required depth of the buffer chosen.



8.2.8 Project Boundary Buffer

The following are the buffering requirements of listed permitted uses in each district and certain special types of development. Special uses may be required to meet additional buffer requirements, but shall in all cases be required to have at a minimum the same buffer as permitted uses. Existing vegetation that meets or exceeds the requirements of the specific buffer is desired and allowed instead of any required new plantings.

Buffers Required for Mobile Home Parks - Mobile home parks shall be required to have the following buffers:	
Location of Buffer for Mobile Home Parks	Type Buffer
Along all boundaries adjacent to a street	Buffer A
Along all boundaries adjacent to single family residential uses or residential lots with a parcel size of less than 1 acre and when a single family structure is within 50' of the boundary of the park	Buffer C
Along all other boundaries	Buffer B

Buffers Required for Multifamily and Planned Developments - Multifamily and Planned Developments shall be required to have the following buffers:	
Location of Buffer for Multi-family & Planned Developments	Type Buffer
Along all boundaries adjacent to a street	Buffer A
Along all boundaries adjacent to single family residential uses or residential lots with a parcel size of less than 1 acre and when a single family structure is within 50' of the boundary of the development	Buffer C
Along all other boundaries	Buffer B

Buffers Required for Shopping Centers - Shopping centers shall be required to have the following buffers:	
Location of Buffer for Shopping Centers	Type Buffer
Along all boundaries adjacent to a street	Buffer A
Along all boundaries adjacent to Residential Districts or uses and adjacent to single family residential uses or residential lots with a parcel size of less than 1 acre and when a single family structure is within 50' of the boundary of the development	Buffer C
Along all other boundaries	Buffer B

Buffers Required for All Non-residential Uses (Excludes Industrial Uses) in All Residential Districts, (RA, RP, RM, MH) - Residential uses in Residential Districts are not required to have buffers, except as required for mobile home parks, Multifamily and Planned Developments. All commercial or uses other than residential uses (excluding industrial uses) in the Residential Districts shall provide the following buffers: Uses in these districts that require a special use permit will in addition, provide other buffers as specified in the special use permit.

Location of Buffer for Non-residential Uses in the Residential Districts	Type Buffer
Along all street boundaries of the Development	Buffer A
Along all boundaries adjacent to single family residential uses or residential lots with a parcel size of less than 1 acre and when a single family structure is within 50' of the boundary of the development	Buffer C
Along all other non-street boundaries	Buffer B

Buffers Required for the Commercial Districts - All uses in the General Business and Office & Institutional Districts shall be required to have the following buffers:

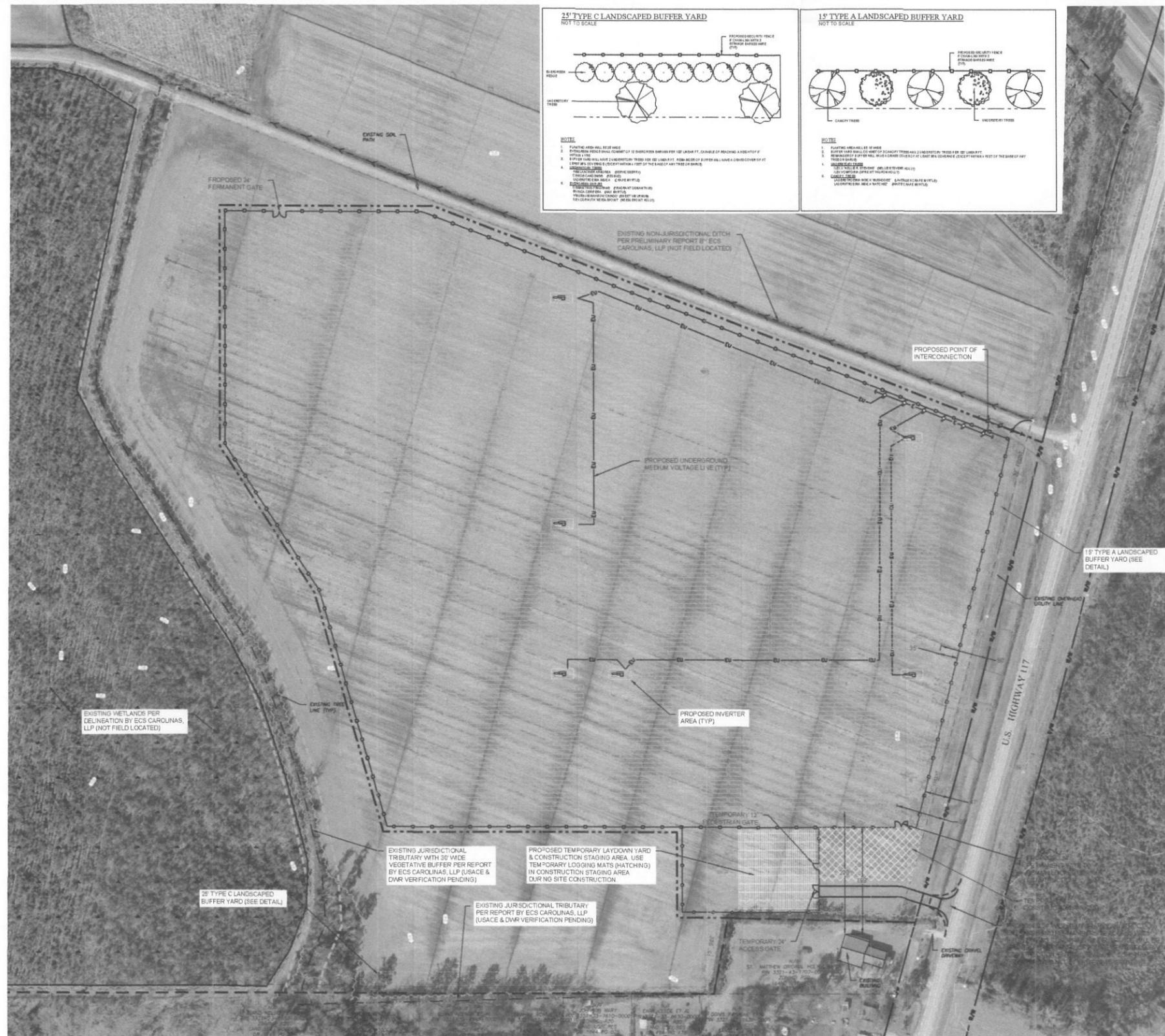
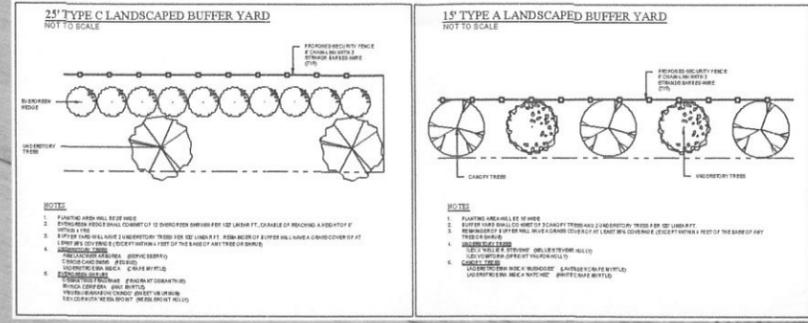
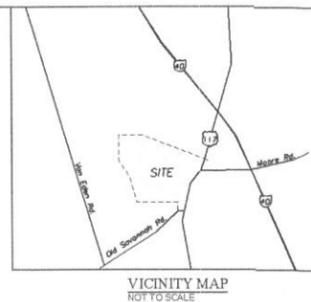
Location of Buffer for GB and OI Districts	Type Buffer
Along all boundaries adjacent to street right-of-ways	Buffer A
Along all non-street boundaries adjacent to Residential Districts and adjacent to single family residential uses or residential lots with a parcel size of less than 1 acre and when a single family structure is within 50' of the boundary of the development	Buffer C
Along all other boundaries	Buffer B

Buffers Required For The Industrial Districts And Industrial Uses In Any Other Districts

Location of Buffer for Industrial Districts	Type Buffer
Along all street boundaries	Buffer D
Along all non-street boundaries adjacent to Residential Districts when adjacent to single family residential structures within 50' of the project boundary	Buffer C
Along all other boundaries	Buffer D

Buffers Required in the Watershed Overlays (WS-PA & WS-CA).

Type Use	Buffer Requirement Watershed Districts
Bona fide Farms	Bona fide Farms in the Watershed Critical Area District (WSCA) shall maintain a 10 foot permanently vegetated buffer adjacent to all perennial waters as shown on the most recent edition of the USGS 1:24000 (7.5 minute) topographic map. The buffer shall remain vegetated and shall be used only for access and utilities.
Silviculture Activities	Silviculture activities shall maintain buffers (Streamside Management Zones) as described in the Division of Forest Resources Rules and Best Management Practices Manual.
All activities, other than bona fide farms and silviculture activities	All activities, other than bona fide farms and silviculture activities shall maintain a 30 foot vegetated buffer adjacent to all perennial waters as shown on the most recent edition of the USGS 1:24000 (7.5 minute) topographic map. The buffer shall remain vegetated and shall be used only for access and utilities.



NOTES

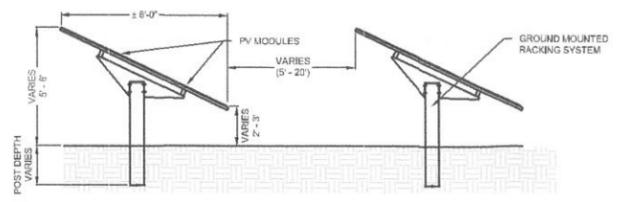
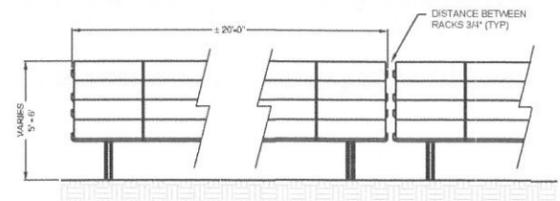
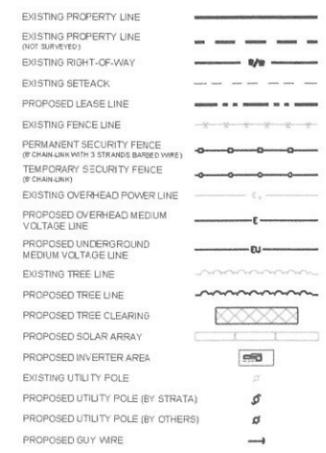
1. EXISTING PROPERTY INFORMATION

PARCEL PIN	OWNER	DB/PD	ZONING	PARCEL ACREAGE	LEASED ACREAGE	LAND USE
3321-14-2787-0000	BEARFORD LLC	1409/148	RA	688.07	33.07	VACANT

SITE ADDRESS: 478 OLD SAVANNAH ROAD, BURGAW, PENDER COUNTY, NC
RIVER BASIN: CAPE FEAR
WATERSHED: BURGAW CREEK
MINIMUM SETBACK REQUIREMENTS:
ZONING RA
FRONT 30'
SIDE 15'
REAR 30'

- THE PURPOSE OF THIS PLAN IS FOR A SPECIAL USE PERMIT APPLICATION FOR REVIEW AND APPROVAL BY PENDER COUNTY TO CONSTRUCT A SOLAR ELECTRIC POWER PLANT. THE LOCATION OF PROPOSED IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO FENCING, SOLAR ARRAY RACKING, INVERTERS, OVERHEAD POLES & LINES, ETC., SHOWN IS APPROXIMATE AND MAY BE SUBJECT TO MODIFICATION DUE TO SITE CONDITIONS, ADDITIONAL PERMITTING REQUIREMENTS (NCDOT, NCCENR, USACE, ETC.), EQUIPMENT SPECIFICATIONS, AND/OR OTHER CONSTRAINTS. ANY REVISIONS WILL BE SUBMITTED FOR STAFF APPROVAL PRIOR TO CONSTRUCTION TO VERIFY COMPLIANCE WITH ZONING REQUIREMENTS AND CONDITIONS AS APPROVED.
- TOPOGRAPHIC DATA & EXISTING IMPROVEMENTS SHOWN ON THIS PLAN IS PER NCDOT LIDAR TOPOGRAPHY, PENDER COUNTY GIS AND AERIAL IMAGERY.
- WATERS OF THE US SHOWN PER PRELIMINARY REPORT BY ECS CAROLINAS, LLP.
- THE PROPERTY SHOWN HEREON DOES NOT CONTAIN SPECIAL FLOOD HAZARD AREAS (SFHAS) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD (E. 100-YR. EVENT) PER FEMA FIRM MAP PANEL NO. 372032100I EFFECTIVE DATE FEBRUARY 16, 2007.
- ALL RIGHT-OF-WAYS ARE PUBLIC, UNLESS NOTED OTHERWISE.
- UTILITY LINES AND SERVICES SHOWN HEREON ARE APPROXIMATE PER AERIAL PHOTOGRAPHY OR AS REPORTED BY VARIOUS RESPONSIBLE PARTIES. LOCATION OF UNDERGROUND UTILITIES ARE APPROXIMATE AND MUST BE FIELD VERIFIED. CALL NC ONE CALL CENTER BEFORE DIGGING AT 811.
- COPIES OF ALL PERMITS AND APPROVED PLANS MUST BE KEPT ON-SITE IN A PERMIT BOX THAT IS CONSPICUOUSLY LOCATED AND EASILY ACCESSIBLE DURING CONSTRUCTION.
- A SEDIMENT AND EROSION CONTROL PLAN WILL BE APPROVED BY NCCENR-LOS PRIOR TO BEGINNING CONSTRUCTION.
- A DRIVEWAY PERMIT WILL BE APPROVED BY NCDOT PRIOR TO BEGINNING CONSTRUCTION.
- PROJECT AREA, INCLUDING CONSTRUCTION STAGING AREAS, WILL BE CLEARED AND GRUBBED AS NECESSARY, RETAINING PRE-DEVELOPMENT DRAINAGE PATTERNS (I.E. NO MASS GRADING). A PORTION OF PROJECT AREAS MAY CONSIST OF TREE CLEARING ONLY (NO GRUBBING) TO ALLEVIATE SHADING OF THE ARRAY, AS INDICATED ON THE SITE PLAN. MINOR GRADING ONLY WILL OCCUR AROUND INVERTER AREAS TO DIVERT SURFACE DRAINAGE. CONSTRUCTION STAGING AREAS SUBJECT TO RUTTING DURING CONSTRUCTION WILL BE TEMPORARILY STABILIZED WITH LOGGING MATS, WHICH WILL BE REMOVED FOLLOWING CONSTRUCTION. THE ONLY PERMANENT IMPERVIOUS SURFACES WILL BE LESS THAN 200 SF OF CONCRETE AT EACH INVERTER AREA.
- PROPOSED TEMPORARY LAYDOWN YARD/CONSTRUCTION STAGING AREA TO BE USED DURING SITE CONSTRUCTION. A PORTION OF THIS AREA (HATCHED) WILL BE COVERED WITH LOGGING MATS TO ALLOW DELIVERY OF CONSTRUCTION MATERIALS. PRIOR TO CONSTRUCTION, THIS AREA WILL BE COMPACTED BY A SMOOTH DRUM ROLLER TO REDUCE/PREVENT RUTTING. FOLLOWING CONSTRUCTION, THE LOGGING MATS ARE REMOVED AND THE ENTIRE AREA IS RESTORED TO PRE-CONSTRUCTION CONDITIONS.
- ACCESS AISLES ARE COMPACTED BY A SMOOTH DRUM ROLLER TO REDUCE/PREVENT RUTTING. LOGGING MATS MAY BE PLACED IN HIGH TRAFFIC OR POORLY DRAINING AREAS DURING CONSTRUCTION ACTIVITIES TO IMPROVE ACCESS. NO PERMANENT IMPROVEMENTS OR IMPERVIOUS SURFACES (I.E. GRAVE, OR ASPHALT) WILL BE INSTALLED IN ACCESS AISLES FOR CONSTRUCTION OR MAINTENANCE ACTIVITIES.
- PROPOSED 24' ACCESS GATE (TWO 12' SECTIONS) IS 8" TALL CHAIN LINK WITH 3 STRANDS OF BARBED WIRE. GATE WILL BE LOCKED WITH STANDARD KEYS OR COMBINATION LOCK. EMERGENCY PERSONNEL (AS DESIGNATED BY PENDER COUNTY) WILL BE PROVIDED A KEY OR COMBINATION FOR ACCESS.
- NO LIGHTING IS PROPOSED FOR THIS SITE.
- ALUMINUM SIGNS ("DANGER - HIGH VOLTAGE" AND "DANGER - NO TRESPASSING") MEASURING 14" X 10" IN SIZE, WILL BE PLACED ON PERMANENT SECURITY FENCING, ALTERNATING EVERY 100' AROUND THE ARRAY.
- SYSTEMS, EQUIPMENT AND STRUCTURES WILL NOT EXCEED FIFTEEN (15) FEET IN HEIGHT WHEN GROUND MOUNTED. EXCLUDED FROM THIS HEIGHT REQUIREMENT, HOWEVER, ARE OVERHEAD ELECTRIC DISTRIBUTION LINES AND UTILITY POLES.
- THE INCREASE IN POST DEVELOPMENT RUNOFF RATE IS EXPECTED TO BE MINIMAL DUE TO THE LOW IMPERVIOUS SURFACE ASSOCIATED WITH THE PROPOSED PROJECT. THEREFORE, A STORMWATER MANAGEMENT PLAN HAS NOT BEEN PREPARED. THE SOLAR PANELS ARE INSTALLED USING A 1/4" GAP ABOVE AND BELOW EACH MODULE AND NCCENR-DWR CONSIDERS THE SOLAR INSTALLATION AS PERVIOUS FOR THE PURPOSE OF STORMWATER CALCULATIONS. IF REQUIRED, A STORMWATER PERMIT WILL BE OBTAINED FROM NCCENR-DWR.

SITE PLAN LEGEND



BEARFORD 9292/16

DC SYSTEM SIZE (kW)	5.8
DC SYSTEM (WV) (kW)	6.076
SYSTEM VOLTAGE	100V
INVERTER	8 x CP60
RACK CONFIGURATION	4 L 1 R
PANELS	FR 11XV
MODULE INCLINATION	20°
AZIMUTH	192°
ROW SPACING	19' (L1/R1)
RACKS REQUIRED	1478
RACKS PROVIDED	1478

PROJECT NAME & ADDRESS

BEARFORD SOLAR ELECTRIC POWER PLANT
478 OLD SAVANNAH RD.
BURGAW, NC
PENDER COUNTY

DATE: 07/09/2015

PROJECT NUMBER: C-346-14-BEAR

PROJECT NAME: BEARFORD

SYSTEM SIZE: 5.00 MWp AC

ENGINEER: BTN

CHECKER: JMH

DRAWN BY: JRD / APL



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REVISIONS

NO.	DATE	DESCRIPTION
1	08/07/15	ADD BUFFERS
2	08/11/15	ADJUST SETBACK
3		
4		
5		
6		
7		
8		
9		
10		

PRELIMINARY SITE PLAN

SCALE: 1" = 100'

C 2.1



Applicant:
Bearford, LLC.

Owner:
Bearford, LLC.

Special Use Permit:
#11451

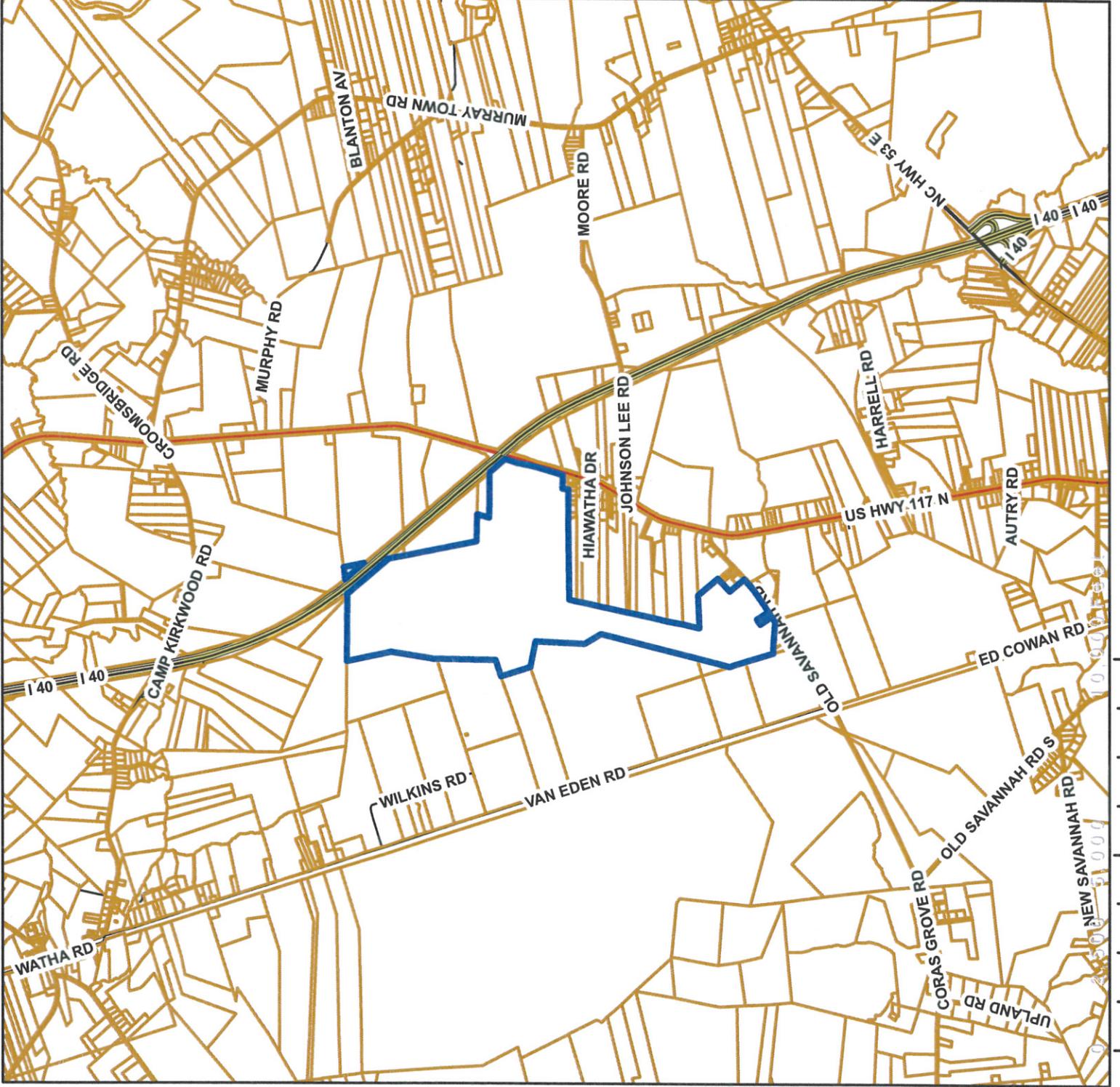
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Subject Property



Vicinity





Applicant:
Bearford, LLC.

Owner:
Bearford, LLC.

Special Use Permit:
#11451

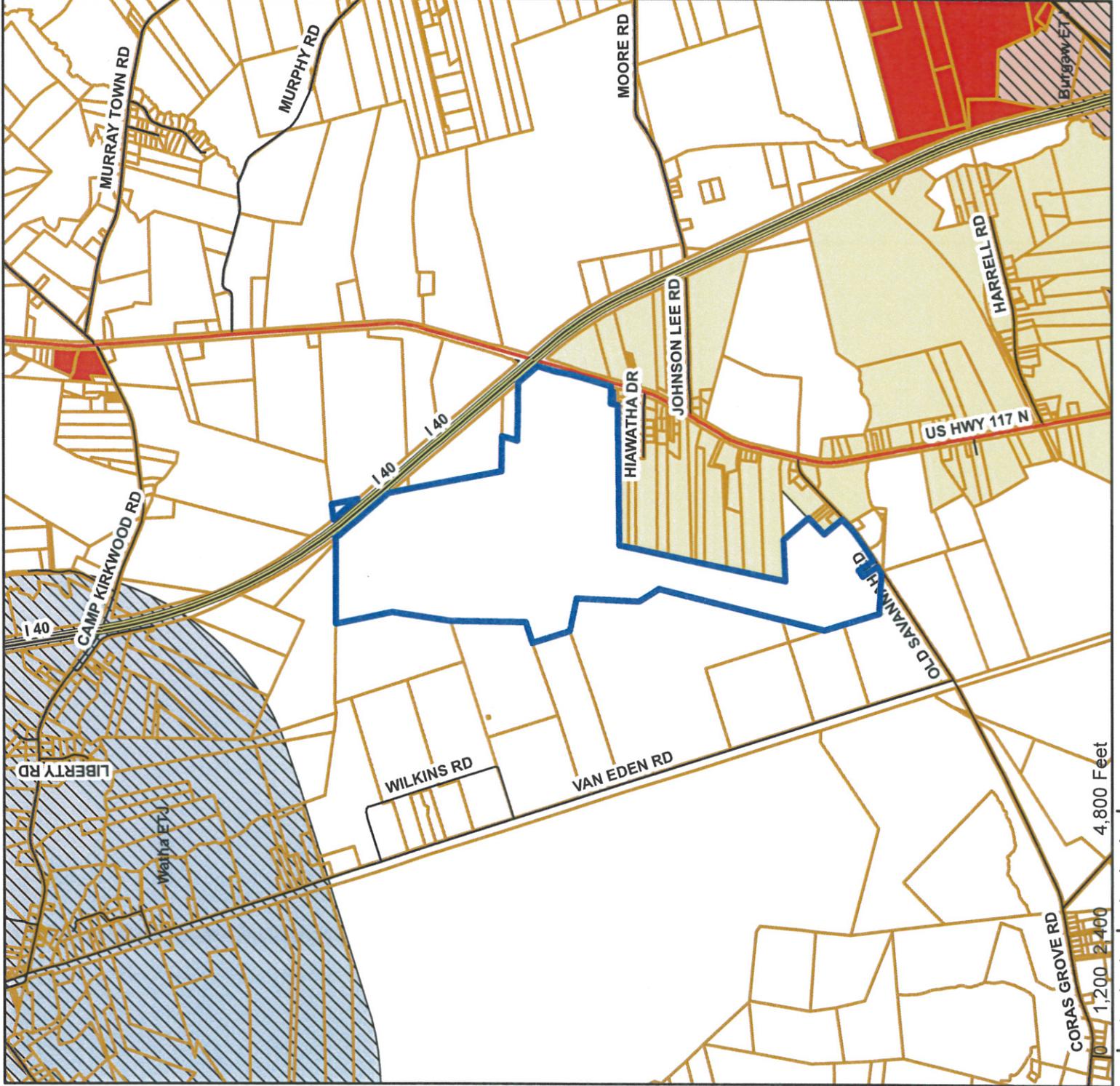
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UDO Zoning

- EC, Environmental Conservation
- GB, General Business
- GI, General Industrial
- Incorporated
- IT, Industrial Transition
- MH, Manufactured Housing
- O&I, Office & Institutional
- PD, Planned Development
- RA, Rural Agricultural
- RA-Conditional Zoning 1
- RP, Residential Performance
- Subject Property



Current Zoning





Applicant:
Bearford, LLC.

Owner:
Bearford, LLC.

Special Use Permit:
#11451

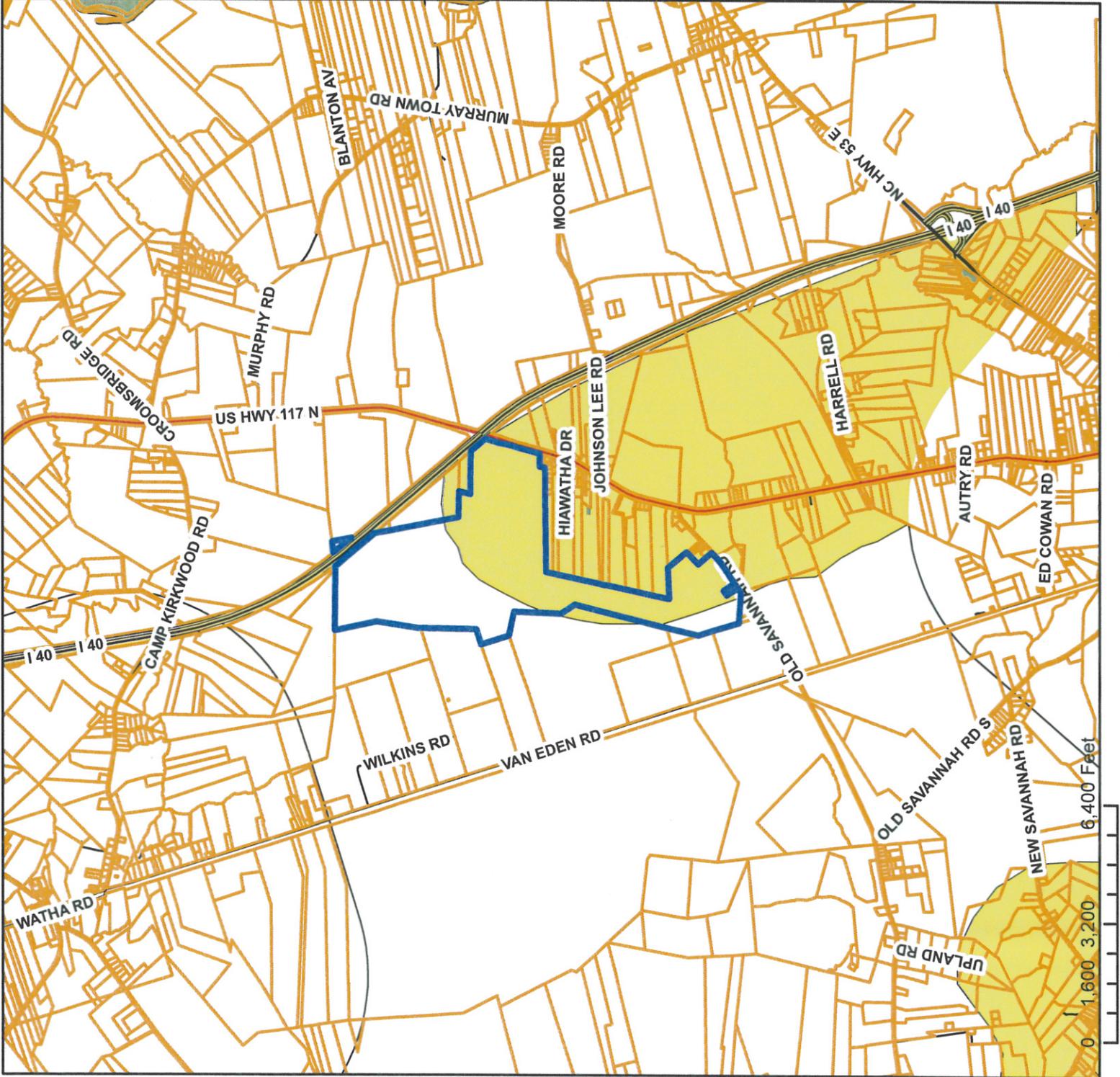
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Future Land Use

-  Industrial
-  Mixed Use
-  Office, Institutional, Business
-  Rural Growth
-  Suburban Growth
-  Subject Property



Future Land Use





Applicant:
Bearford, LLC.

Owner:
Bearford, LLC.

Special Use Permit:
#11451

Legend



Subject Property



2012 Aerial

