

High Shoals Solar

Gaston County
PCUP
Public Hearing

April 23, 2019



Ecoplexus, Inc.
101 Second Street, Suite 1250
San Francisco, CA 94105



Request

PCUP – Solar Farm

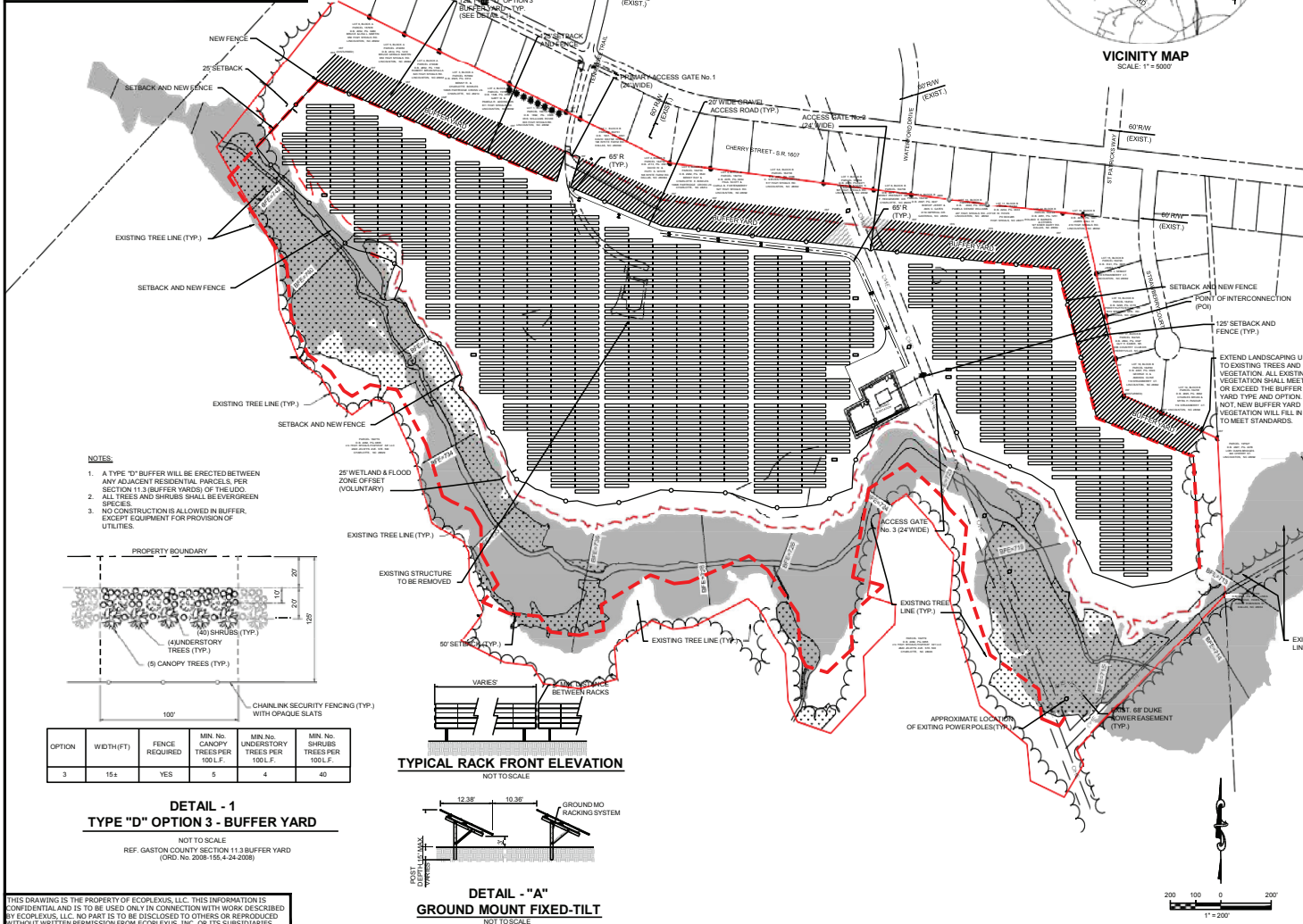
- Currently zoned R-1
- Total parcel acreage: 131.97
- Proposed acres to be used: 81.14
- 50' Setback Per Code
- 75' Setback in initial hearing
- 150' Setback in this application



About Ecoplexus

- Successfully developed, completed/in design construction phase over 400MWs in multiple countries
- Owns 200MWs+ of IPP assets in the US and Japan as of end of 2018
- Extensive experience with over 50 projects completed, and 3.5GW+ of projects currently in development in the USA and Internationally
- Complete range of Operations and Maintenance services, 325MWs+ under O&M globally

GENERAL PROJECT INFORMATION	
PROJECT NAME:	HIGH SHOALS PV1
PROJECT ADDRESS:	LAT: 35.336° / LON: -81.218°
DEVELOPER NAME:	ECOPLEXUS
DEVELOPER ADDRESS:	101 2ND ST., STE. 1250, SAN FRANCISCO, CA 94105
GENERAL SYSTEM INFORMATION	
MODULE:	HANNAHO PLUS L-G4.2 340
QUANTITY:	58,128
INVERTER:	HUAWEI SUN2000-40KTL-US-HV-D0
QUANTITY:	346
MOUNTING SYSTEM:	180
MOUNTING SYSTEM TYPE:	FIXED TILT, 20° TILT, 180° AZIMUTH, 54.1% GCR
SYSTEM SIZE (DC):	19.8MW
SYSTEM SIZE (AC):	16.5MW
UTILIZED FENCED AREA:	81.14 ACRES



- NOTES:**
- THE PURPOSE OF THIS PLAN IS TO PROVIDE GASTON COUNTY WITH ADEQUATE INFORMATION TO GRANT A CONDITIONAL USE PERMIT FOR A SOLAR POWERPLANT.
 - THE PROJECT EXTENTS REFLECT THE PROPOSED LOCATION OF THE SOLAR FACILITY. HOWEVER, PERMITTING (STATE AND FEDERAL) AND EQUIPMENT AVAILABILITY MAY REQUIRE MODIFICATIONS TO THE SOLAR ARRAY WITHIN THE FENCED AREA. ANY CHANGES TO THE FENCE THAT INCREASE THE AREA WITHIN THE FENCE WILL BE SUBMITTED FOR REVIEW. STAFF WILL DETERMINE WHETHER OR NOT THE PROPOSED CHANGES WILL REQUIRE APPROVAL FROM THE BOARD OF COMMISSIONERS.
 - PROPERTY DATA
 PARCEL No. 184778
 OWNER: BCCG ASSOCIATES, INC.
 OWNER ADDRESS:
 PO BOX 7855
 CHARLOTTE, NC 28241
 SITE STREET ADDRESS:
 601 HIGH SHOALS ROAD
 LINCOLTON, NC 28902
 AREA TOTAL: 131.87 ACRES
 - PARCEL CURRENT ZONING: R-1 (SINGLE FAMILY LIMITED DISTRICT)
 SETBACKS (FT.): FRONT 50 SIDE 25 REAR 50
 - PARCEL PROPOSED ZONING: R-2 (SINGLE FAMILY MODERATE DISTRICT)
 SETBACKS (FT.): FRONT 50 SIDE 25 REAR 50
 - PARCEL LINE DATA, TOPOGRAPHIC DATA, AND EXISTING CONDITIONS DATA HAS BEEN OBTAINED FROM A FIELD SURVEY PERFORMED BY PAUL J. TOTI ON MAY 14 AND 15, 2018.
 - WETLAND INFORMATION HAS BEEN DELINEATED AND OBTAINED FROM SAME ON APRIL 2, 2018. WETLAND DELINEATION HAS NOT BEEN VERIFIED BY THE U.S. ARMY CORPS OF ENGINEERS.
 - SUBJECT PARCELS IS LOCATED WITHIN A FEDERALLY DESIGNATED FLOOD HAZARD AREA (COMMUNITY PANEL NUMBER 37030300U) & 37030300U EFFECTIVE DATE: SEPTEMBER 26, 2007.
 - NO PERMANENT LIGHTING IS PROPOSED FOR THIS SITE.
 - ON-SITE STRUCTURES WILL NOT EXCEED 15 FEET IN HEIGHT EXCLUDING UTILITY POLES.
 - REGULAR OPERATING HOURS OF THE FACILITY ARE 24 HOURS PER DAY 365 DAYS PER YEAR. THE SITE WILL NOT REQUIRE THE DAILY PRESENCE OF ON-SITE PERSONNEL AND WILL BE CONSIDERED UNMANNED. THE PERFORMANCE DATA FROM THE SITE, SUCH AS POWER PRODUCTION, WILL BE PROVIDED TO ECOPLEXUS VIA WIRELESS CELLULAR COMMUNICATIONS. THEREFORE, THE SITE WILL BE REMOTELY MONITORED.
 - CONCRETE PERMITS WILL BE OBTAINED FROM DOT PRIOR TO CONSTRUCTION.
 - A SEGMENT AND EROSION CONTROL PLAN WILL BE OBTAINED FROM DOT PRIOR TO CONSTRUCTION.
 - BUILDING AND ELECTRICAL PERMITS WILL BE OBTAINED BY THE DEVELOPER PRIOR TO LAND DISTURBANCE AND MIDDLE PLACEMENT, RESPECTIVELY.
 - A TEMPORARY STAGING AREA WILL BE ESTABLISHED DURING CONSTRUCTION. UPON COMPLETION OF CONSTRUCTION THIS AREA WILL BE REMOVED. ANY SOIL OR GRAVEL PATHS MAY REMAIN FOR LONG TERM SITE ACCESS.
 - THE PROPOSED SOLAR ARRAY WILL BE ENCLOSED BY A 6-FOOT TALL CHAIN LINK FENCE WITH 3 STRANDS OF BARBED WIRE ALONG THE TOP. TOTAL FENCE HEIGHT WILL BE 7 FEET.
 - DATE CODES WILL BE PROVIDED TO LOCAL EMERGENCY PERSONNEL AND PUBLIC SERVICES SUCH AS GASTON COUNTY BUILDING INSPECTIONS, ZONING OFFICE DURING INSPECTIONS.
 - SOME WILL BE PLACED AT THE SOLAR POWER PLANT PER THE NATIONAL ELECTRIC SAFETY CODE (NEC) SECTION 115.1.1 AND THE NATIONAL ELECTRIC CODE (NEC) NFPA 70 SECTION 115.3(A)(2).
 - PERMITTING REQUIREMENTS WILL BE MET FOR ALL JURISDICTIONAL DITCH CROSSINGS.
 - PLANS SHALL BE IN COMPLIANCE WITH ANY FLOOD HAZARD REQUIREMENTS REQUIRED BY GASTON COUNTY. SITE IS WITHIN THE SOUTH FORK PROTECTED IN WATERSHED DISTRICT. THE PROPOSED PLAN WILL BE IN COMPLIANCE WITH GASTON COUNTY AND A WATERSHED PERMIT APPROVAL WILL BE OBTAINED.
 - ZONING FOR ALL LISTED PROPERTIES IS R-20 FOR GASTON COUNTY JURISDICTION, AND LAND-USE TYPE OF CONTIGUOUS PROPERTIES IS RESIDENTIAL, EXCLUDING PARCEL #184778 ZONED AS R-7 BY CITY OF HIGH SHOALS.
 - IF THE PROJECT IS APPROVED, PERMITS WILL BE OBTAINED AND WILL BE SUBJECT TO LAND USE OFFICE INSPECTION FOR COMPLIANCE WITH THE APPROVED PLAN AND CONDITIONS.

ecoplexus

101 Second Street, Ste. 1250
 San Francisco, CA 94105
 Tel: 415-445-1882
 Fax: 415-445-3466

PRELIMINARY
 DO NOT USE FOR CONSTRUCTION

REV	DATE	DESCRIPTION
1	11/14/2018	RESPONSE TO COUNTY COMMENTS
2	11/14/2018	RESPONSE TO COUNTY COMMENTS
3	12/17/2018	RESPONSE TO COUNTY COMMENTS
4	04/10/2019	RESPONSE TO COUNTY COMMENTS

HIGH SHOALS PV1
 601 HIGH SHOALS ROAD
 LINCOLTON, NC 28902
 GASTON COUNTY

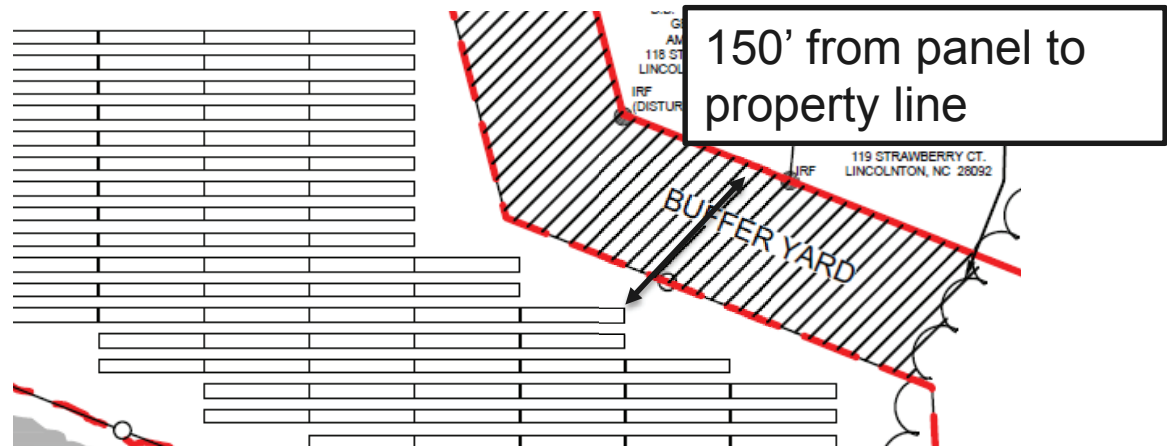
DESIGNED BY: CL
DRAWN BY: TMB
CHECKED BY: P-2018
DATE: 04/10/2019

ZONING SITE PLAN

PROJECT No. PV1.1

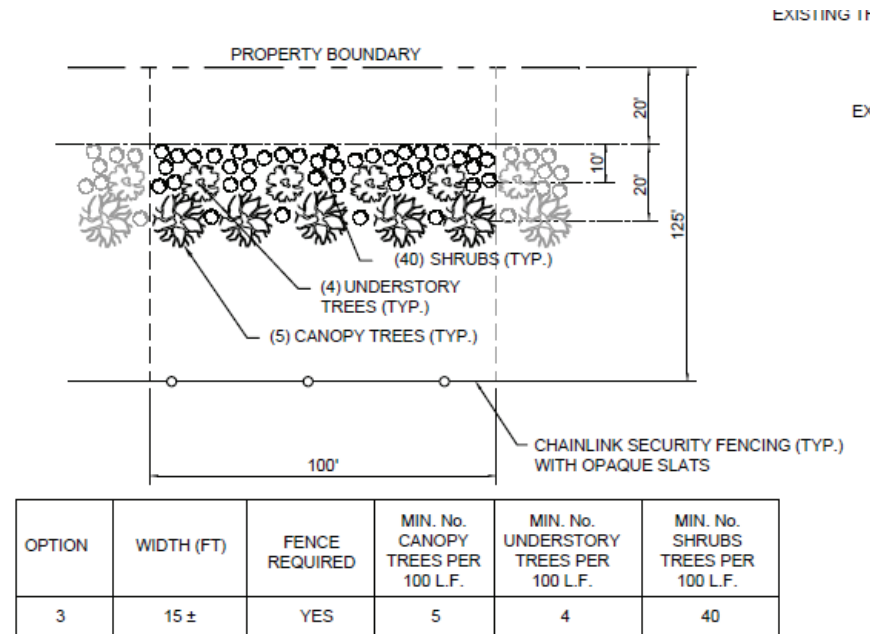
Site Plan

- Moved setback from residential parcels to panels from 50' to 150'
- Secured access gate at property boundary at the end of Tennessee Trail
- Wetlands and Floodplains at southern boundary will be avoided with 25' additional setback to fence line
- Existing mature tree line along east and west will be maintained where there are no residences.



Landscaping

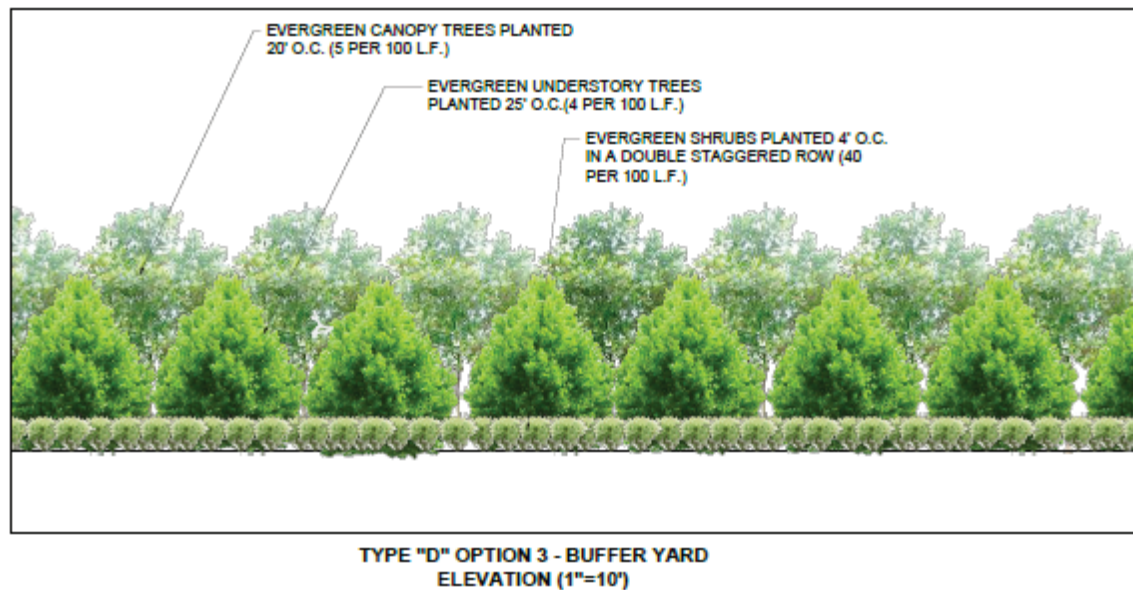
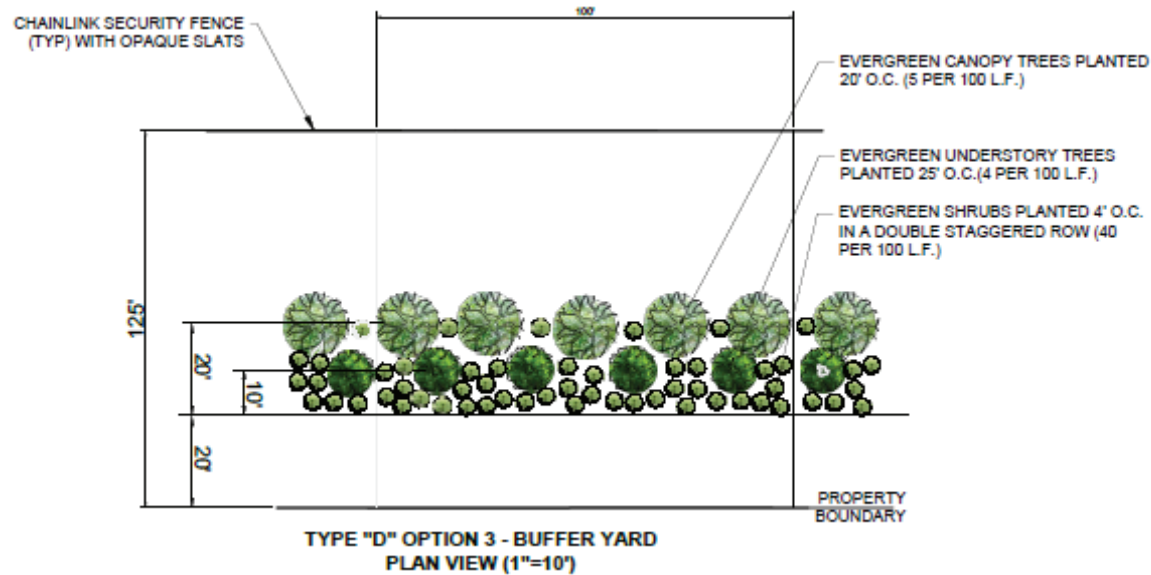
- Type D-3 landscape buffer proposed
- 8' Canopy Trees at Planting
- 100% Evergreen species to include:
 - Nelly Stevens Holly
 - Magnolia
 - American Holly
 - And others per the Gaston County Approved Tree and Shrub Species list
- Use of native grasses and pollinator mix for ground cover.



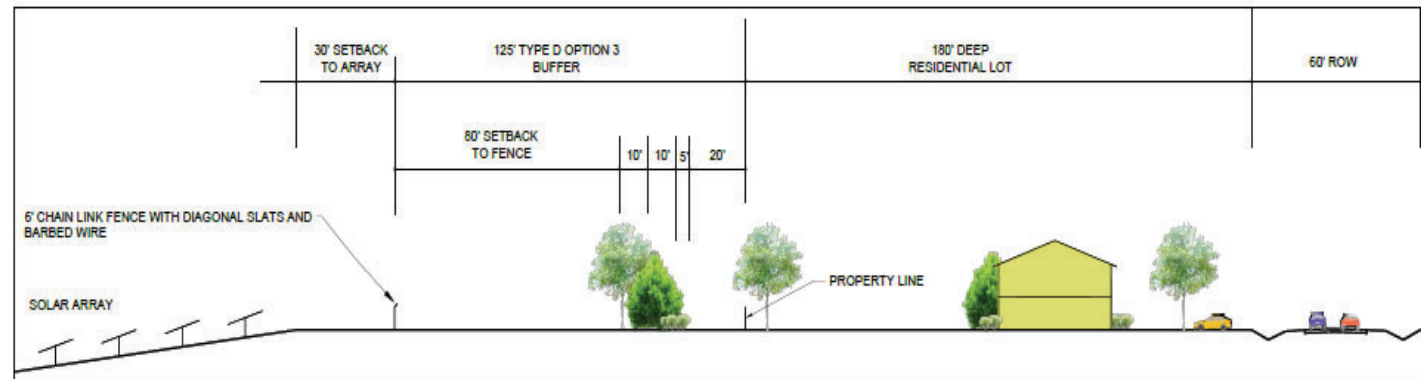
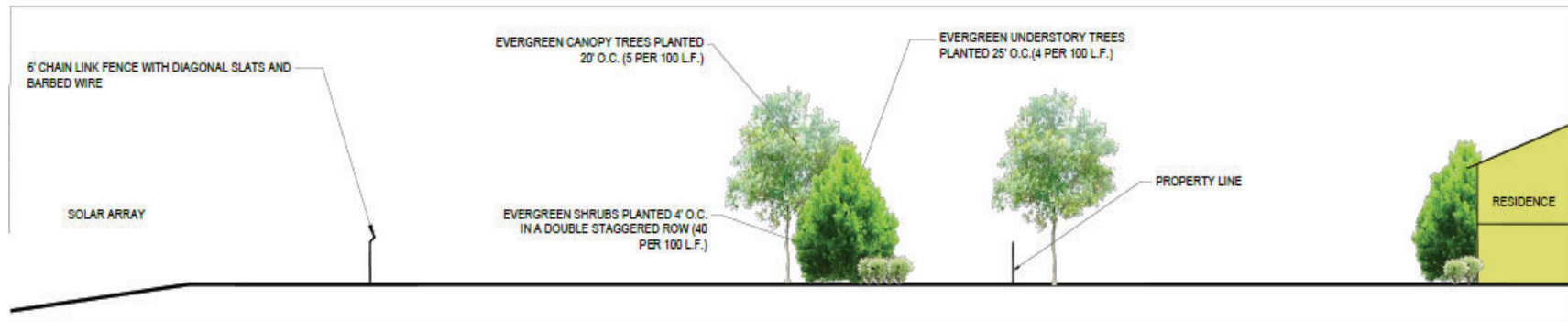
DETAIL - 1
TYPE "D" OPTION 3 - BUFFER YARD

NOT TO SCALE
 REF. GASTON COUNTY SECTION 11.3 BUFFER YARD
 (ORD. No. 2008-155, 4-24-2008)

Landscaping



Landscaping



Landscaping



Red clover is the first to bloom at our project in Elon using a pollinator friendly ground cover.

Property Values

- Surveyed 550 solar farms over a 12 year period - over 90% adjoining uses are Ag/Res
- Identified 30 solar farms in Gaston and surrounding counties - similar mix of adjoining uses
- Identified 13 solar farms in NC with adjoining sales
- 20 residential homes next to solar farms show no impact on residential values
- 4 of those residential homes are in Gaston County
- 8 land sales next to solar farms show no impact on land value
- 3 of those land sales are in Gaston County

Health and Safety of Solar

- Generate minimal-to-no traffic (site maintenance and routine property upkeep) once construction is complete
- Solar energy facilities produce electricity without and air, water, or ground emissions. The solar panels do not contain liquids and pose no toxicity risk.
- Site will meet all North Carolina and Gaston County Building codes.
- Completely enclosed by security fencing

Local Public Safety

- Will secure this property and stop the nuisances occurring in this behind residences including; crime, illegal dumping, rodent issues, and late night ATV traffic
- Access codes are given to local fire, police, and County Planning in case of emergence and regular inspection
- In the Last 12 Months
 - 12 Calls specifically to this address
 - 34 other calls along addresses of 415-700 High Shoals Rd for suspicious activity, car break ins, shooting, etc.

Benefits of Solar Energy

Solar Energy

- Safe, clean, and abundant energy source
- Can help meet community economic development goals as well
- Provides jobs for system installers and manufacturers
- Generates electricity without the emissions and pollution associated with fossil fuels
- Tax revenue without additional burden on services.
- Duke announces adding 20% more solar that will save consumers approximately \$375 million over the next 20 years.

Project Characteristics

- Hazardous material - no potential hazardous waste byproducts with solar farm operation
- Odor - no odor concerns
- Noise - no noise concerns
- Traffic - less traffic than a single family home
- Stigma - no known stigma
- Appearance - addressed by setbacks and landscaping



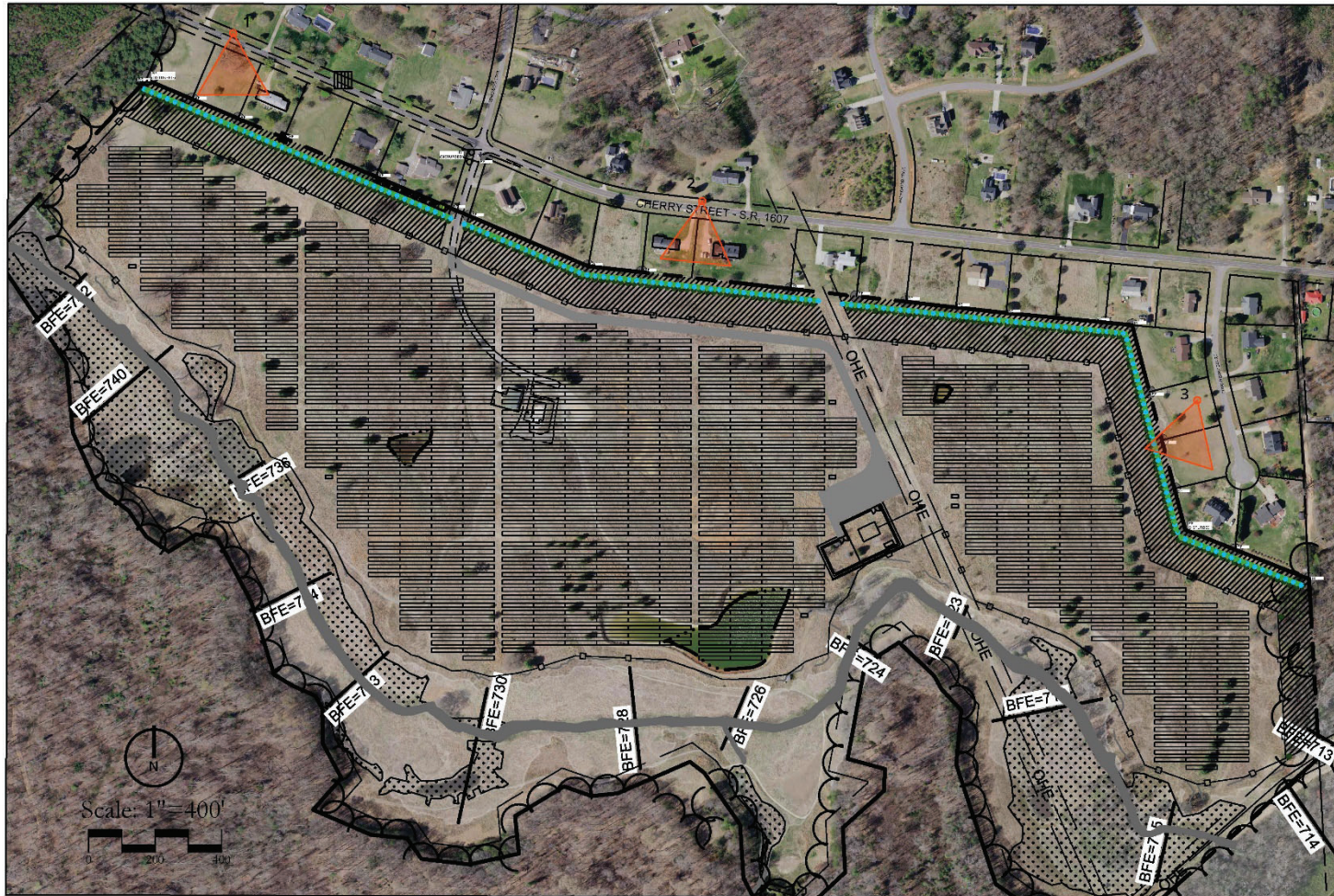
Questions?

Appendices

Trees and Shrubs for Screening, Charlotte Area NC

<u>Canopy Tree Category</u>	Mature height (feet)	Mature width (feet)
Japanese Cedar Yoshino	30-40	15-25
Colorado Blue Spruce Fat Albert	30-40	15-20
Green Giant Thuja	35-40	15-20
<u>Understory Tree Category</u>	Mature height (feet)	Mature width (feet)
Nellie Stevens Holly	15-20	8-10
Emily Bruner Holly	15-20	8-10
Magnolia Teddy Bear	20-25	10-15
American Holly	30-40	15-25
<u>Shrub Category</u>	Mature height (feet)	Mature width (feet)
Loropetalum chinense	6-8	6-8
Chindo Viburnum	10-15	8-10
Osmanthus Fragrans	10-15	6-8
Camelia Japonica	15-20	6-10

Landscaping



HIGH SHOALS ROAD PERSPECTIVE INDEX

Landscaping



PERSPECTIVE 1



April 15, 2019

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Landscaping



PERSPECTIVE 2

Landscaping



PERSPECTIVE 3