



March 21, 2023

Tammy Glave, CZO
Senior Planner
Currituck County
153 Courthouse Road, Suite 110
Currituck, North Carolina 27929

2801 Yorkmont Road
Suite 100
Charlotte, North Carolina 28208
+1 (704) 357-5623
Licensure:
NC Engineering F-1253
NC Geology C-247
wsp.com

**Re: Special Use Permit Modification Application (Permit PB 20-18)
Oak Trail Solar - O&M Building Addition
Currituck County, North Carolina**

Dear Ms. Glave:

WSP USA Environment & Infrastructure Inc. (WSP) is submitting this Special Use Permit Application on behalf of Oak Trail Solar, LLC. Please note this application is a modification (to include the addition of an Operations & Maintenance Building) of the previously approved Use Permit for the Oak Trail Solar Project (PB 20-18).

Application components include:

- Exhibit 1 – Special Use Permit Application and Attachments
- Exhibit 2 – Conceptual Site Plan and Architectural Building Elevations
- Exhibit 3 – Updates to Solar Energy Facility Impact Analysis Related to Addition of O&M Building
- Exhibit 4 – Community Meeting Summary

Included in this submission:

- Application Fee - \$300
- Two copies of conceptual site plans
- Two hard copies of ALL documents
- One PDF digital copy of all plans and documents

Please do not hesitate to contact me at (704) 357-5623 or thomas.maier@wsp.com if you have any questions.

Sincerely,
WSP USA Environment & Infrastructure Inc.

A handwritten signature in blue ink that reads "Thomas B Maier".

Thomas Maier, PE
Principal Engineer



EXHIBIT 1

Special Use Permit Application Form and Attachments



Use Permit Application

OFFICIAL USE ONLY:

Case Number: _____
 Date Filed: _____
 Gate Keeper: _____
 Amount Paid: _____

Contact Information
APPLICANT:

Name: Oak Trail Solar, LLC
 Address: 6688 N. Central Expressway, Suite 500
Dallas, TX 75206
 Telephone: 205-948-6018
 E-Mail Address: Brad.Thompson@LeewardEnergy.com

PROPERTY OWNER:

Name: Karen Lea Jarvis
 Address: 230 Station House Rd
New Bern, NC 28562
 Telephone: 252-227-1172
 E-Mail Address: KLJARVIS.1984@gmail.com

LEGAL RELATIONSHIP OF APPLICANT TO PROPERTY OWNER: Lessee

Property Information

Physical Street Address: Puddin Ridge Road, Moyock, NC 27958
 Location: Puddin Ridge Road, Moyock, NC 27958
 Parcel Identification Number(s): 8021-45-3564
 Total Parcel(s) Acreage: 99
 Existing Land Use of Property: Solar Energy Facility (Oak Trail Solar, LLC)

Request

Project Name: Operations and Maintenance Building ("O&M Building") for Oak Trail Solar facility
 Proposed Use of the Property: O&M Building addition to previously approved solar energy facility
 Deed Book/Page Number and/or Plat Cabinet/Slide Number: DB 1693/PG 825
 Total square footage of land disturbance activity: 57,484 sqft
 Total lot coverage: 2.76% Total vehicular use area: 12,797 sqft
 Existing gross floor area: N/A Proposed gross floor area: 2,000 sqft

Community Meeting

Date Meeting Held: March 15, 2023 (6pm - 8pm) Meeting Location: 109 Green View Rd, Moyock, NC 27958

Purpose of the Use Permit and Project Narrative (please provide on additional paper if needed): _____
See Attachment #1

The applicant shall provide a response to the each one of the following issues. The Board of Commissioners must provide specific findings of fact based on the evidence submitted. All findings shall be made in the affirmative for the Board of Commissioners to issue the use permit.

A. The use will not endanger the public health or safety.

See Attachment #2

B. The use will not injure the value of adjoining or abutting lands and will be in harmony with the area in which it is located.

See Attachment #2

C. The use will be in conformity with the Land Use Plan or other officially adopted plan.

See Attachment #2

D. The use will not exceed the county's ability to provide adequate public facilities, including, but not limited to, schools, fire and rescue, law enforcement, and other county facilities. Applicable state standards and guidelines shall be followed for determining when public facilities are adequate.

See Attachment #2

I, the undersigned, do certify that all of the information presented in this application is accurate to the best of my knowledge, information, and belief. Further, I hereby authorize county officials to enter my property for purposes of determining zoning compliance. All information submitted and required as part of this application process shall become public record.


12F10D6ACDF3400...

3/21/2023

Property Owner(s)/Applicant*

Date

***NOTE: Form must be signed by the owner(s) of record, contract purchaser(s), or other person(s) having a recognized property interest. If there are multiple property owners/applicants a signature is required for each.**

Use Permit Conceptual Plan Design Standards Checklist
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The table below depicts the design standards of the use permit application. Please make sure to include all applicable listed items to ensure all appropriate standards are reviewed.

Use Permit Conceptual Plan Design Standards Checklist

Date Received: _____

TRC Date: _____

Project Name: _____

Applicant/Property Owner: _____

Use Permit Conceptual Plan Design Standards Checklist	
1	Property owner name, address, phone number, and e-mail address.
2	Site address and parcel identification number.
3	North arrow and scale to be 1" = 100' or larger.
4	Vicinity map showing property's general location in relation to streets, railroads, and waterways.
5	Existing zoning classification and zoning setback lines of the property.
6	A scaled drawing showing existing boundary lines, total acreage, adjacent use types, location of streets, rights-of-way, and easements.
7	Approximate location of the following existing site features and infrastructure within the property and within 50' of the existing property lines: Pedestrian circulation, vehicular use areas, structures, septic systems, wells, utility lines, water lines, culverts, storm drainage pipes, ditches, canals, streams, wooded areas, ponds, and cemeteries.
8	Approximate location of the following proposed site features and infrastructure: Structures and usages, parking and circulation plan (including streets, drives, loading and service areas parking layout and pedestrian circulation features), fences and walls, exterior lighting, drainage patterns and facilities intended to serve the development, landscape buffers and screening, and riparian buffers.
9	Approximate Flood Zone line and Base Flood Elevation as delineated on the "Flood Insurance Rate Maps/Study Currituck County."
10	Approximate location of all designated Areas of Environmental Concern or other such areas which are environmentally sensitive on the property, such as Maritime Forest, CAMA, 404, or 401 wetlands as defined by the appropriate agency.
11	Sight distance triangles.
12	Proposed common areas, open space set-asides, and required buffers.
13	Architectural drawings and/or sketches illustrating the design and character of the proposed uses.

Use Permit Submittal Checklist

Staff will use the following checklist to determine the completeness of your application within ten business days of submittal. Please make sure all of the listed items are included. Staff shall not process an application for further review until it is determined to be complete.

Use Permit Submittal Checklist

Date Received: _____

TRC Date: _____

Project Name: _____

Applicant/Property Owner: _____

Use Permit Submittal Checklist		
1	Complete Use Permit application	
2	Application fee (\$300)	
3	Community meeting written summary	
4	Conceptual plan, if applicable	
5	Architectural elevations, if applicable	
6	2 copies of plans	
7	2 hard copies of ALL documents	
8	1 PDF digital copy of all plans AND documents (ex. Compact Disk – e-mail not acceptable)	

For Staff Only

Pre-application Conference

Pre-application Conference was held on _____ and the following people were present:

Comments



ATTACHMENT 1

Use-Specific Standards Narrative

**Oak Trail Solar, LLC O&M Building
Use Permit Application Attachment #1
Application Use-Specific Standards Narrative (UDO § 4.2.3.K)**

Oak Trail Solar, LLC (“Oak Trail”), a wholly owned indirect subsidiary of Leeward Renewable Energy, LLC, received approval of Use Permit PB 20-18 from the Currituck County Planning and Community Development Department on January 4, 2021 for a Solar Energy Facility.¹ This application seeks a modification to the previously issued Use Permit PB 20-18 for the addition of an approximately 2,000 square foot on-site operations and maintenance building (“O&M Building”) to serve the Solar Energy Facility.

Included as Exhibit 2 is a preliminary site plan (“Site Plan”) showing the O&M Building location within the Solar Energy Facility footprint. As reflected on the Site Plan, the O&M Building has been designed to meet or exceed the use-specific standards required under the Currituck County Unified Development Ordinance (“UDO”) § 4.2.3.K and as detailed below.

1. **Location (UDO § 4.2.3.K.1):** The O&M Building is not located in a Full-Service area designated by the Land Use Plan and is not located in a Significant Heritage Area as identified by the NC Natural Heritage Program.
2. **Maximum Size (UDO § 4.2.3.K.2):** The O&M Building will be sited within the previously approved Solar Energy Facility footprint, which meets the maximum size requirements.
3. **Setbacks (UDO § 4.2.3.K.3):** The O&M Building will be sited within the previously approved Solar Energy Facility footprint, which meets all required setbacks.
4. **Height and Configuration (UDO § 4.2.3.K.4):** The O&M Building will not exceed 20 feet in height and will be constructed to avoid glare beyond the exterior property lines.
5. **Sound (UDO § 4.2.3.K.5):** Oak Trail will comply with the hours of operation during construction of 7:00am to 7:00pm, Monday through Saturday. The O&M Building is not located within 1,500 feet of a public school or licensed pre-school.
6. **Buffers and Screening (UDO § 4.2.3.K.6):** The O&M Building will be sited within the previously approved Solar Energy Facility footprint, which meets all required buffers and screening.
7. **Development Plan (UDO § 4.2.3.K.7):** The Development Plan that was approved by the Currituck County Planning and Inspections department on June 14, 2021, is being amended to include the O&M Building as part of the related Major Site Plan amendment application.
8. **Environmental Concerns (UDO § 4.2.3.K.8):** As noted in the approved Solar Energy Facility application, Oak Trail will maintain appropriate ground cover/grass for soil stabilization and will maintain it in such a manner that it does not create a fire hazard.

¹ Oak Trail also received Major Site Plan approval from Currituck County Planning and Inspections for the Solar Energy Facility on June 14, 2021.
PPAB 8212986v2

9. **Solar Facility Impact Analysis (UDO § 4.2.3.K.9):** Oak Trail submitted a Solar Facility Impact Analysis in the approved Solar Energy Facility Use Permit application. Oak Trail has included updates to sections of the approved Solar Facility Impact Analysis that were impacted by the O&M Building addition with this application as Exhibit 3.
10. **Ditch Maintenance (UDO § 4.2.3.K.10):** As noted in the approved Solar Energy Facility Use Permit application, Oak Trail will comply with the ditch maintenance obligations in the UDO. A site drainage plan was submitted with the Major Site Plan that was approved by the Currituck County Planning and Inspections department on June 14, 2021.
11. **Discontinued Use and Decommissioning (UDO § 4.2.3.K.11):** Oak Trail will comply with all discontinued use and decommissioning requirements in the UDO. Oak Trail's draft decommissioning plan was approved in Use Permit PB 20-18, and a decommissioning report was done in June, 2022. Oak Trail will update the decommissioning plan to reference the O&M Building in accordance with UDO § 4.2.3.K.11.c. Oak Trail also submitted the current Decommissioning Performance Guarantee in accordance with UDO requirements on November 11, 2022, which will be reviewed as part of the decommissioning plan update and will remain in effect until decommissioning and site restoration is complete.



ATTACHMENT 2

Finding of Facts Narrative

**Oak Trail Solar, LLC O&M Building
Use Permit Application Attachment #2
Application Findings of Fact Narrative (UDO § 2.4.6.D)**

The Oak Trail Solar, LLC (“Oak Trail”) operations and maintenance building (“O&M Building”) addition, as designed, satisfies the four findings the Board of Commissioners considers when issuing Use Permits, as outlined in Unified Development Ordinance (“UDO”) § 2.4.6.D.

Finding 1: The proposed use **will not** endanger the public health or safety:

The O&M Building is a low impact use that will not endanger public health or safety. The O&M Building will be sited within the fenced footprint of the Solar Energy Facility and will be built in compliance with the North Carolina Building Code.

Finding 2: The proposed use **will not** injure the value of adjoining or abutting lands and will be in harmony with the area in which it is located:

The O&M Building is proposed within the footprint of the previously approved Solar Energy Facility. As such, the O&M Building will be within the solar facility setbacks and behind the required solar facility vegetative buffering. The O&M Building is an approximately 2,000 square foot building, which is similar to the visual profile of the single-family rural residences in the area.

Finding 3: The proposed use **will** be in general conformity with the land use plan, thoroughfare plan, or other plan officially adopted by the Board of Commissioners:

The O&M Building is designed to be in conformity with the requirements of the land use plan and other officially adopted plans by the County. The Imagine Currituck 2040 Vision Plan (the “Plan”) includes a Northern Mainland Future Land Use Map, which classifies the parcel being used for the O&M Building as O2 – Reserved Lands. Plan Map 7. Appropriate land uses and development types for the O2 – Reserved Lands area include cultivated farmland and accessory agricultural structures and low-density single family rural residential that prioritizes preservation of open space and natural landscapes. Plan pg. 56. The O&M Building will be in conformity with the purpose of the O-2 Reserved Lands designation as it has a similar visual profile to an accessory agricultural structure or a low-density single family rural residential structure.

Finding 4: The proposed use **will not** exceed the County’s ability to provide adequate public facilities, including, but not limited to, schools, fire and rescue, law enforcement, and other county facilities. Applicable state standards and guidelines shall be followed for determining when public facilities are adequate.

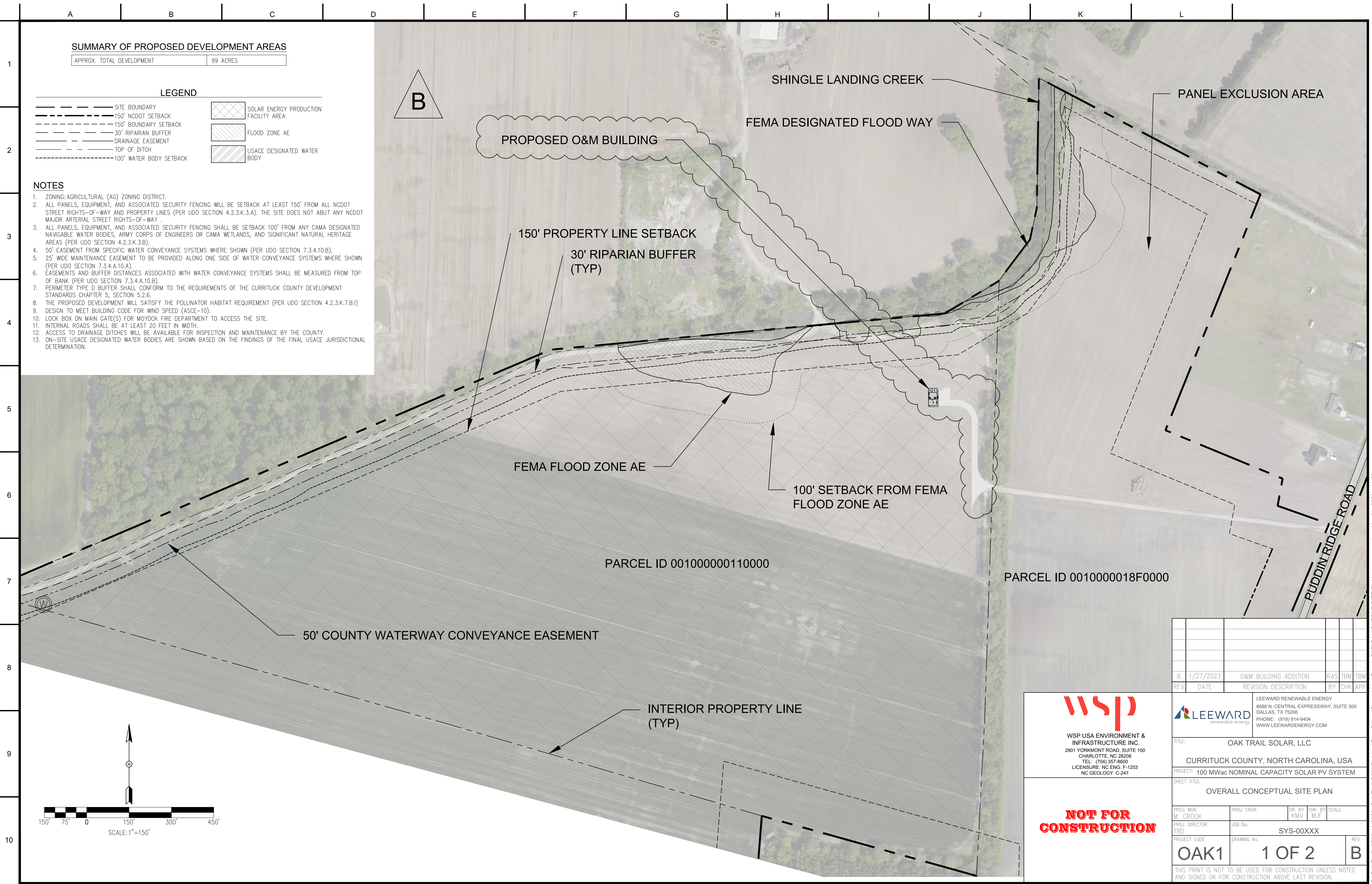
The O&M Building will not exceed the County’s ability to provide adequate public facilities. Because the O&M Building is not a use that will involve residents, will only involve employees on-site on occasion for maintenance, and will be within the fenced area of the Solar Energy Facility to prevent unauthorized access, it will not increase the need for new schools or strain existing schools and will have much less need for fire, rescue and law enforcement than most uses such as a residential subdivision.



Exhibit 2

Drawings

1. Overall Conceptual Site Plan
2. Enlarged O&M Building Site Plan
3. Building Elevations



SUMMARY OF PROPOSED DEVELOPMENT AREAS

APPROX. TOTAL DEVELOPMENT	99 ACRES
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LEGEND

--- SITE BOUNDARY	[Cross-hatched box] SOLAR ENERGY PRODUCTION FACILITY AREA
--- 150' NCDOT SETBACK	[Diagonal hatched box] FLOOD ZONE AE
--- 150' BOUNDARY SETBACK	[Horizontal hatched box] USACE DESIGNATED WATER BODY
--- 30' RIPARIAN BUFFER	
--- DRAINAGE EASEMENT	
--- TOP OF DITCH	
--- 100' WATER BODY SETBACK	

NOTES

1. ZONING: AGRICULTURAL (AG) ZONING DISTRICT.
2. ALL PANELS, EQUIPMENT, AND ASSOCIATED SECURITY FENCING WILL BE SETBACK AT LEAST 150' FROM ALL NCDOT STREET RIGHTS-OF-WAY AND PROPERTY LINES (PER UDO SECTION 4.2.3.K.3.A). THE SITE DOES NOT ABUT ANY NCDOT MAJOR ARTERIAL STREET RIGHTS-OF-WAY.
3. ALL PANELS, EQUIPMENT, AND ASSOCIATED SECURITY FENCING SHALL BE SETBACK 100' FROM ANY CAMA DESIGNATED NAVIGABLE WATER BODIES, ARMY CORPS OF ENGINEERS OR CAMA WETLANDS, AND SIGNIFICANT NATURAL HERITAGE AREAS (PER UDO SECTION 4.2.3.K.3.B).
4. 50' EASEMENT FROM SPECIFIC WATER CONVEYANCE SYSTEMS WHERE SHOWN (PER UDO SECTION 7.3.4.A.10.B).
5. 25' WIDE MAINTENANCE EASEMENT TO BE PROVIDED ALONG ONE SIDE OF WATER CONVEYANCE SYSTEMS WHERE SHOWN (PER UDO SECTION 7.3.4.A.10.A).
6. EASEMENTS AND BUFFER DISTANCES ASSOCIATED WITH WATER CONVEYANCE SYSTEMS SHALL BE MEASURED FROM TOP OF BANK (PER UDO SECTION 7.3.4.A.10.B).
7. PERIMETER TYPE D BUFFER SHALL CONFORM TO THE REQUIREMENTS OF THE CURRITUCK COUNTY DEVELOPMENT STANDARDS CHAPTER 5, SECTION 5.2.6.
8. THE PROPOSED DEVELOPMENT WILL SATISFY THE POLLINATOR HABITAT REQUIREMENT (PER UDO SECTION 4.2.3.K.7.B.1).
9. DESIGN TO MEET BUILDING CODE FOR WIND SPEED (ASCE-10).
10. LOCK BOX ON MAIN GATE(S) FOR MOYOCK FIRE DEPARTMENT TO ACCESS THE SITE.
11. INTERNAL ROADS SHALL BE AT LEAST 20 FEET IN WIDTH.
12. ACCESS TO DRAINAGE DITCHES WILL BE AVAILABLE FOR INSPECTION AND MAINTENANCE BY THE COUNTY.
13. ON-SITE USACE DESIGNATED WATER BODIES ARE SHOWN BASED ON THE FINDINGS OF THE FINAL USACE JURISDICTIONAL DETERMINATION.

REV	DATE	REVISION DESCRIPTION	BY	CHK	APP
B	1/27/2023	O&M BUILDING ADDITION	RAS	TBM	TEM

wsp
WSP USA ENVIRONMENT & INFRASTRUCTURE INC.
2801 YORKMONT ROAD, SUITE 100
CHARLOTTE, NC 28208
TEL: (704) 357-8600
LICENSURE: NC ENG: F-1253
NC GEOLOGY: C-247

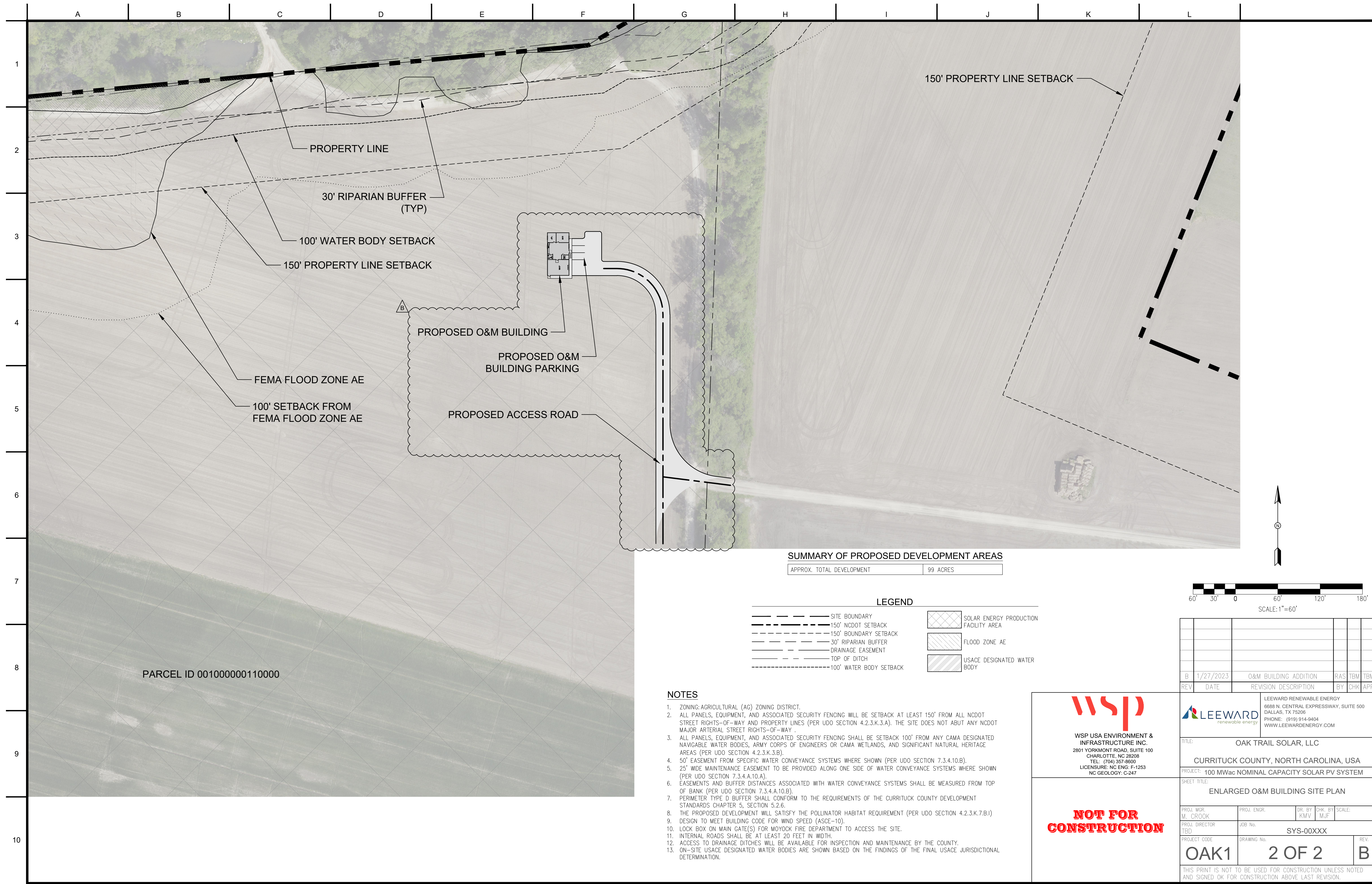
LEEWARD
LEEWARD RENEWABLE ENERGY
6688 N. CENTRAL EXPRESSWAY, SUITE 500
DALLAS, TX 75206
PHONE: (919) 914-9404
WWW.LEEWARDENERGY.COM

NOT FOR CONSTRUCTION

TITLE: OAK TRAIL SOLAR, LLC					
PROJECT: CURRITUCK COUNTY, NORTH CAROLINA, USA					
SHEET TITLE: 100 MWac NOMINAL CAPACITY SOLAR PV SYSTEM					
OVERALL CONCEPTUAL SITE PLAN					
PROJ. MGR. M. CROOK	PROJ. ENGR. K.M.V.	DR. BY M.J.F.	CHK. BY SCALE M.J.F.		
PROJ. DIRECTOR TBD	JOB No. SYS-00XXX				
PROJECT CODE OAK1	DRAWING No. 1 OF 2	REV. B			

THIS PRINT IS NOT TO BE USED FOR CONSTRUCTION UNLESS NOTED AND SIGNED OK FOR CONSTRUCTION ABOVE LAST REVISION.

C:\Oak_Trail_6706-19-0060_Oak_Trail_O&M_Building\FromOthers\Special Use Permit\CAD\OAK-BUBBLE SITE PLAN.dwg ryan.spiker Mar 21, 2023 - 11:58am



SUMMARY OF PROPOSED DEVELOPMENT AREAS

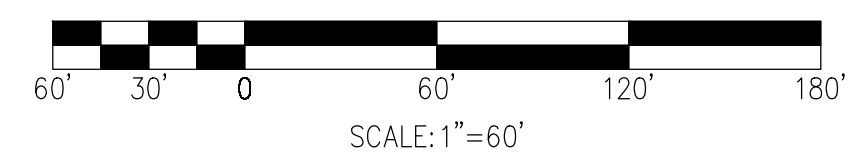
APPROX. TOTAL DEVELOPMENT	99 ACRES
---------------------------	----------

LEGEND

— SITE BOUNDARY	▨ SOLAR ENERGY PRODUCTION FACILITY AREA
— 150' NCDOT SETBACK	▨ FLOOD ZONE AE
— 150' BOUNDARY SETBACK	▨ USACE DESIGNATED WATER BODY
— 30' RIPARIAN BUFFER	
— DRAINAGE EASEMENT	
— TOP OF DITCH	
— 100' WATER BODY SETBACK	

NOTES

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- ALL PANELS, EQUIPMENT, AND ASSOCIATED SECURITY FENCING WILL BE SETBACK AT LEAST 150' FROM ALL NCDOT STREET RIGHTS-OF-WAY AND PROPERTY LINES (PER UDO SECTION 4.2.3.K.3.A). THE SITE DOES NOT ABUT ANY NCDOT MAJOR ARTERIAL STREET RIGHTS-OF-WAY.
- ALL PANELS, EQUIPMENT, AND ASSOCIATED SECURITY FENCING SHALL BE SETBACK 100' FROM ANY CAMA DESIGNATED NAVIGABLE WATER BODIES, ARMY CORPS OF ENGINEERS OR CAMA WETLANDS, AND SIGNIFICANT NATURAL HERITAGE AREAS (PER UDO SECTION 4.2.3.K.3.B).
- 50' EASEMENT FROM SPECIFIC WATER CONVEYANCE SYSTEMS WHERE SHOWN (PER UDO SECTION 7.3.4.A.10.B).
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- PERIMETER TYPE D BUFFER SHALL CONFORM TO THE REQUIREMENTS OF THE CURRITUCK COUNTY DEVELOPMENT STANDARDS CHAPTER 5, SECTION 5.2.6.
- THE PROPOSED DEVELOPMENT WILL SATISFY THE POLLINATOR HABITAT REQUIREMENT (PER UDO SECTION 4.2.3.K.7.B.1).
- DESIGN TO MEET BUILDING CODE FOR WIND SPEED (ASCE-10).
- LOCK BOX ON MAIN GATE(S) FOR MOYOCK FIRE DEPARTMENT TO ACCESS THE SITE.
- INTERNAL ROADS SHALL BE AT LEAST 20 FEET IN WIDTH.
- ACCESS TO DRAINAGE DITCHES WILL BE AVAILABLE FOR INSPECTION AND MAINTENANCE BY THE COUNTY.
- ON-SITE USACE DESIGNATED WATER BODIES ARE SHOWN BASED ON THE FINDINGS OF THE FINAL USACE JURISDICTIONAL DETERMINATION.



REV	DATE	REVISION DESCRIPTION	BY	CHK	APP
B	1/27/2023	O&M BUILDING ADDITION	RAS	TBM	TBM

WSP
WSP USA ENVIRONMENT & INFRASTRUCTURE INC.
 2801 YORKMONT ROAD, SUITE 100
 CHARLOTTE, NC 28208
 TEL: (704) 357-8600
 LICENSE: NC ENG: F-1253
 NC GEOLOGY: C-247

LEEWARD
 renewable energy
 LEEWARD RENEWABLE ENERGY
 8688 N. CENTRAL EXPRESSWAY, SUITE 500
 DALLAS, TX 75206
 PHONE: (919) 914-9404
 WWW.LEEWARDENERGY.COM

NOT FOR CONSTRUCTION

OAK TRAIL SOLAR, LLC
 CURRITUCK COUNTY, NORTH CAROLINA, USA
 PROJECT: 100 MWac NOMINAL CAPACITY SOLAR PV SYSTEM
 SHEET TITLE: ENLARGED O&M BUILDING SITE PLAN

PROJ. MGR. M. CROOK	PROJ. ENGR. K.M.V.	DR. BY M.J.F.	CHK. BY M.J.F.	SCALE:
PROJ. DIRECTOR TBD	JOB No. SYS-00XXX			
PROJECT CODE OAK1	DRAWING No. 2 OF 2	REV. B		

THIS PRINT IS NOT TO BE USED FOR CONSTRUCTION UNLESS NOTED AND SIGNED OK FOR CONSTRUCTION ABOVE LAST REVISION.
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BUILDER / CONTRACTOR RESPONSIBILITIES

IT IS THE RESPONSIBILITY OF THE BUILDER/CONTRACTOR TO INSURE THAT ALL PROJECT PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE REQUIREMENTS OF ANY GOVERNING BUILDING AUTHORITIES. THE SUPPLYING OF SEALED ENGINEERING DATA AND DRAWINGS FOR THE METAL BUILDING SYSTEM DOES NOT IMPLY OR CONSTITUTE AN AGREEMENT THAT THE METAL BUILDING SYSTEM MANUFACTURER OR ITS DESIGN ENGINEER IS ACTING AS THE ENGINEER OF RECORD OR DESIGN PROFESSIONAL FOR A CONSTRUCTION PROJECT. THE CONTRACTOR MUST SECURE ALL REQUIRED APPROVALS AND PERMITS FROM THE APPROPRIATE AGENCY AS REQUIRED. APPROVAL OF THE METAL BUILDING SYSTEM MANUFACTURER'S DRAWINGS AND CALCULATIONS INDICATE THAT THE METAL BUILDING SYSTEM MANUFACTURER CORRECTLY INTERPRETED AND APPLIED THE REQUIREMENTS OF THE CONTRACT DRAWINGS AND SPECIFICATIONS. (SECT. 4.2.1 AISC CODE OF STANDARD PRACTICES, 9TH ED.) WHERE DISCREPANCIES EXIST BETWEEN THE METAL BUILDING SYSTEM MANUFACTURER'S STRUCTURAL STEEL PLANS AND THE PLANS FOR OTHER TRADES, THE STRUCTURAL STEEL PLANS SHALL GOVERN. (SECT. 3.3 AISC CODE OF STANDARD PRACTICE 9TH ED.) DESIGN CONSIDERATIONS OF ANY MATERIALS IN THE STRUCTURE WHICH ARE NOT FURNISHED BY THE METAL BUILDING SYSTEM MANUFACTURER ARE THE RESPONSIBILITY OF THE CONTRACTORS AND ENGINEERS OTHER THAN THE METAL BUILDING SYSTEM MANUFACTURER'S ENGINEER UNLESS SPECIFICALLY INDICATED. THE CONTRACTOR IS RESPONSIBLE FOR ALL ERECTION OF STEEL AND ASSOCIATED WORK IN COMPLIANCE WITH THE METAL BUILDING SYSTEM MANUFACTURER "FOR CONSTRUCTION" DRAWINGS. ALL BRACING AS SHOWN AND PROVIDED BY THE METAL BUILDING SYSTEM MANUFACTURER FOR THIS BUILDING IS REQUIRED AND SHALL BE INSTALLED BY THE ERECTOR AS A PERMANENT PART OF THE STRUCTURE. TEMPORARY SUPPORTS, SUCH AS TEMPORARY GUYS, BRACES, FALSE WORK, CRIBBING OR OTHER ELEMENTS REQUIRED FOR THE ERECTION OPERATION WILL BE DETERMINED AND FURNISHED AND INSTALLED BY THE ERECTOR. THESE TEMPORARY SUPPORTS WILL SECURE THE STEEL FRAMING, OR ANY PARTLY ASSEMBLED STEEL FRAMING, AGAINST LOADS COMPARABLE IN INTENSITY TO THOSE FOR WHICH THE STRUCTURE WAS DESIGNED, RESULTING FROM WIND, SEISMIC FORCES AND ERECTION OPERATIONS, BUT NOT THE LOADS RESULTING FROM THE PERFORMANCE OF WORK BY OR THE ACTS OF OTHERS, NOR SUCH UNPREDICTABLE LOADS AS THOSE DUE TO TORNADO, EXPLOSION, OR COLLISION. (SECT. 7.9.1 AISC CODE OF STANDARD PRACTICE, 9TH ED.)

FRAMING

COLOR: RED OXIDE
ROOF PANELS: 26 RL
 COLOR: Galvalume Plus 25-yr
WALL PANELS: 26 RL

COLOR: Need SMP Lifetime Color
TRIM COLORS
 GABLE: Need SMP Lifetime Color
 CORNER: Need SMP Lifetime Color
 EAVE: Need SMP Lifetime Color
 FRAMED OPENINGS: Need SMP Lifetime Color

DOWNSPOUT:
GUTTER:
LINER PANELS
LEFT ENDWALL:
RIGHT ENDWALL:
FRONT SIDEWALL:
BACK SIDEWALL:
CEILING:
TRIM COLOR:
GABLE SOFFIT PANELS:
 TYPE:
 COLOR:

CANOPY SOFFIT PANELS:
 TYPE:
 COLOR:
EAVE EXTENSION PANELS:
 TYPE:
 COLOR:

BUILDING LOADS / DESCRIPTION

WIDTH: 30 LENGTH: 60 HEIGHT: 12 /12
 FRONT PITCH: 1.0:12 BACK PITCH: 1.0:12
 (BUILDING DIMENSIONS ARE NOMINAL. REFER TO PLANS).
 THIS STRUCTURE IS DESIGNED UTILIZING THE LOADS INDICATED AND APPLIED AS REQUIRED BY : IBC 18/IBC 18

THE CONTRACTOR IS TO CONFIRM THAT THESE LOADS COMPLY WITH THE REQUIREMENTS OF THE LOCAL BUILDING DEPARTMENT.
ROOF DEAD LOAD: 2.00 PSF (ROOF PANELS & PURLINS)
COLLATERAL LOAD: 1.00 PSF
OCCUPANCY: II - Normal
ROOF LIVE LOAD: 20.00 PSF
LIVE LOAD DEFLECTION: Yes
ROOF SNOW LOAD: 8.40 PSF
GROUND SNOW LOAD: 10 PSF
BASIC WIND SPEED: 123.0 MPH
WIND EXPOSURE: C
SEISMIC DESIGN CATEGORY: A
FACTORS:
WIND IMPORTANCE: 1.00 Ss: 0.08
SNOW IMPORTANCE: 1.00 S_{ds}: 0.08
SEISMIC IMPORTANCE: 1.00 S_{e1}: 0.06
SNOW THERMAL: 1.20 SITE CLASS: d
SNOW EXPOSURE: 1.0000

DEFLECTION LIMITS

EW COLUMN:	180
EW RAFTER LIVE:	180
EW RAFTER WIND:	180
WALL GIRT:	90
PURL LIVE:	180
PURL WIND:	150
WALL PANEL:	60
ROOF PANEL LIVE:	60
ROOF PANEL WIND:	60
RF HORIZONTAL:	60
RF VERTICAL:	180
WIND BENT:	60
RF CRANE:	100
RF SEISMIC:	50
WIND BENT SEIS:	50

APPROVAL NOTES

THE FOLLOWING CONDITIONS APPLY IN THE EVENT THAT THESE DRAWINGS ARE USED AS APPROVAL DRAWINGS: IT IS IMPERATIVE THAT ANY CHANGES TO THESE DRAWINGS BE MADE IN CONTRASTING INK (PREFERABLY RED INK), HAVE ALL INSTANCES OF CHANGE CLEARLY INDICATED, AND BE LEGIBLE AND UNAMBIGUOUS. A SIGNATURE AND DATE IS REQUIRED ON ALL PAGES. MANUFACTURER RESERVES THE RIGHT TO RE-SUBMIT DRAWINGS WITH EXTENSIVE OR COMPLEX CHANGES REQUIRED TO AVOID MISFABRICATION, THIS MAY IMPACT THE DELIVERY SCHEDULE. APPROVAL OF THESE DRAWINGS INDICATES CONCLUSIVELY THAT THE METAL BUILDING SYSTEM MANUFACTURER HAS CORRECTLY INTERPRETED THE CONTRACT REQUIREMENTS, AND FURTHER CONSTITUTES AGREEMENT THAT THE BUILDING AS DRAWN WITH INDICATED CHANGES REPRESENTS THE TOTAL OF THE MATERIALS TO BE SUPPLIED BY MANUFACTURER. ANY CHANGES NOTED ON THE DRAWINGS NOT IN CONFORMANCE WITH THE TERMS AND REQUIREMENTS OF THE CONTRACT BETWEEN MANUFACTURER AND ITS CUSTOMER ARE NOT BINDING ON MANUFACTURER UNLESS SUBSEQUENTLY SPECIFICALLY ACKNOWLEDGED AND AGREED TO IN WRITING BY CHANGE ORDER OR SEPARATE DOCUMENTATION. MANUFACTURER RECOGNIZES THAT "RUBBER STAMPS" ARE ROUTINELY USED FOR INDICATING APPROVAL, DISAPPROVAL, REJECTION, OR MERE REVIEW OF THE DRAWINGS SUBMITTED. HOWEVER, MANUFACTURER DOES NOT ACCEPT CHANGES OR ADDITIONS TO CONTRACTUAL TERMS AND CONDITIONS THAT MAY APPEAR WITH USE OF A STAMP OR SIMILAR INDICATION OF APPROVAL, DISAPPROVAL, ETC. SUCH LANGUAGE APPLIED TO MANUFACTURER'S DRAWINGS BY THE CUSTOMER, ARCHITECT, ENGINEER, OR ANY OTHER PARTY WILL BE CONSIDERED AS UNACCEPTABLE ALTERNATIONS TO THESE DRAWING NOTES, AND WILL NOT ALTER THE CONTRACTUAL RIGHTS AND OBLIGATIONS EXISTING BETWEEN MANUFACTURER AND ITS CUSTOMER.

GENERAL NOTES:

- MATERIALS :**
 HOT ROLLED BAR Fy = 36.0000 ksi MIN.
 STRUCTURAL STEEL SHEET Fy = 50.0000 ksi MIN.
 STRUCTURAL STEEL PLATE Fy = 50.0000 ksi MIN.
 COLD FORMED SHAPES Fy = 57.0000 ksi MIN.
 WALL SHEETING Fy = 80.0000 ksi MIN.
 ROOF SHEETING Fy = 80.0000 ksi MIN.
 BOLTS A307 & A325
 THE METAL BUILDING MANUFACTURER RESERVES THE RIGHT TO SUBSTITUTE THE ABOVE MATERIALS WITH EQUAL OR BETTER MATERIAL.
- BOLT TIGHTENING REQUIREMENTS:**
 ALL HIGH STRENGTH BOLTS ARE A325 UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS SHALL BE TIGHTENED BY THE TURN OF THE NUT METHOD IN ACCORDANCE WITH THE LATEST EDITION AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS". A325 BOLTS SHALL BE INSTALLED WITH OUT WASHERS WHEN TIGHTENED BY THE "TURN OF THE NUT" METHOD. ALL BOLTED CONNECTIONS, FOR SHEAR/BEARING CONNECTION TYPE WITH BOLT THREADS EXCLUDED FROM THE SHEAR PLANE SHALL BE SNUG TIGHT ONLY.
- ALL STRUCTUAL STEEL TO RECEIVE A RUST INHIBITIVE PRIMER. THIS PAINT IS NOT INTENDED FOR LONG TERM EXPOSURE TO THE ELEMENTS.**
- THE UNDERSIGNED PROFESSIONAL ENGINEER IS NOT THE ENGINEER OF THE RECORD FOR THE OVERALL PROJECT. THIS CERTIFICATION COVERS PARTS MANUFACTURED AND DELIVERED BY THE MANUFACTURER ONLY, AND EXCLUDES PARTS SUCH AS DOOR, WINDOWS, FOUNDATION DESIGN AND ERECTION OF THE STRUCTURE.**

SPECIAL NOTES:

REV	DATE	PRINTS ISSUED FOR
	10/10/22	REVIEW
△		
△		
△		

Nichols Buildings, Inc (19155)			
PROJECT	Moyock Quote	COVER SHEET / NOTES / LOADS	
ID	221010-973-R1-DM5	DESIGN: CSM	DRAFT: CSM CHECK: ___
PROJECT	Moyock, NC 27958	DATE: 10/10/22	SHEET 1 OF ___
ADDRESS	PROJ ADR 2		

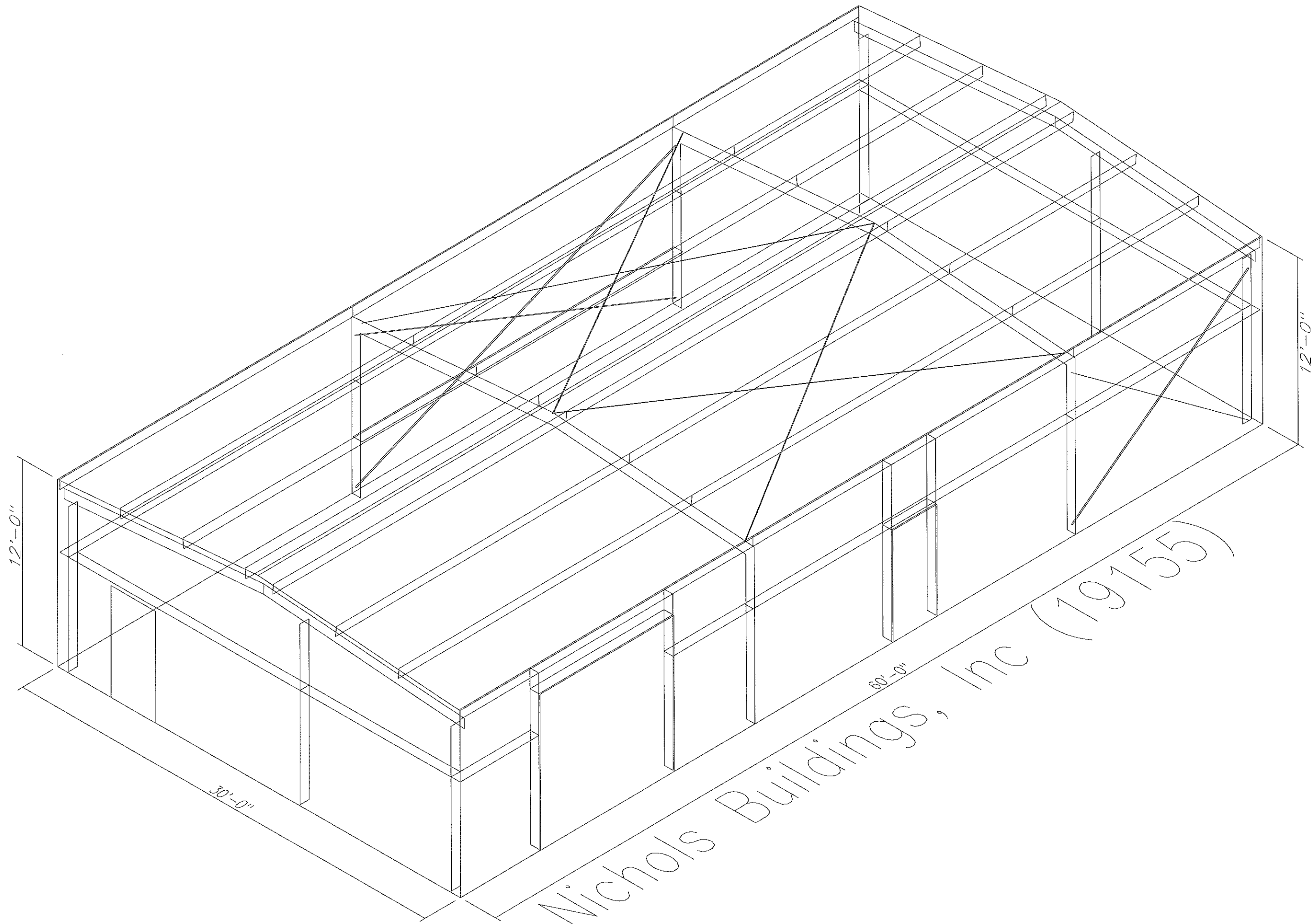




Exhibit 3

Updates to Solar Energy
Facility Impact Analysis Related to Addition of O&M Building



REVISIONS TO SOLAR ENERGY FACILITY IMPACT ANALYSIS DUE TO ADDITION OF OPERATIONS AND MAINTENANCE BUILDING

OAK TRAIL SOLAR PROJECT
CURRITUCK COUNTY, NORTH CAROLINA
OAK TRAIL SOLAR, LLC

PREPARED BY:
WSP USA ENVIRONMENT & INFRASTRUCTURE INC.
2801 YORKMONT ROAD, SUITE 100
CHARLOTTE, NC 28208

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March 21, 2023

Prepared By:
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Charlotte, NC 28208

Prepared For:
Oak Trail Solar, LLC
6688 N. Central Expressway, Suite 500
Dallas, TX 75206

WSP Project No.: 6706-19-0060



LIST OF ACRONYMS

E&SC	erosion and sediment controls
Facility	solar photovoltaic power generation facility
First Solar	First Solar, Inc.
H&H	hydrologic and hydraulic
NCDOT	North Carolina Department of Transportation
Site	Oak Trail Project Site
Oak Trail	Oak Trail Solar, LLC
O&M	Operation and Maintenance
PV	photovoltaic
ROW	right-of-way
SEF	Solar Energy Facility
SPCC	Spill Prevention, Control, and Countermeasure Plan
SWP3	Stormwater Pollution Prevention Plan
TMEIC	Toshiba Mitsubishi-Electric Industrial Systems Corporation
UDO or Ordinance	Currituck County Unified Ordinance Development
UL	Underwriters Laboratory
USACE	U.S. Army Corps of Engineers
WOUS	Waters of the U.S.

SOLAR ENERGY FACILITY IMPACT ANALYSIS

1.0 REVISIONS TO APPROVED IMPACT ANALYSIS DUE TO ADDITION OF OPERATIONS AND MAINTENANCE BUILDING

A Solar Energy Facility (SEF) Impact Analysis was prepared for the Currituck County Use Permit application related to the development of a solar photovoltaic (PV) power generation facility (Facility) at the Oak Trail Project Site (Site). The Use Permit for the Facility was approved by the Board of Commissioners on November 16, 2020 (PB 20-18). This amendment being sought for the addition of the Operations and Maintenance Building (“O&M Building”) does not impact the vast majority of the previously reviewed and approved Impact Analysis. The only sections requiring revisions due to the addition of the O&M Building are provided below.

2.0 CONSTRUCTION ACTIVITY PLAN

2.1 AMOUNT OF LAND DISTURBANCE

Construction operations have begun land disturbance under NCDEQ Project ID: Curri-2021-013 for clearing and grubbing within areas intended for development of Facility components (e.g. PV modules, substation, utility switchyard, and support construction areas [e.g., construction entrances, laydown yards, etc.]). The addition of the O&M Building, related access road, and parking will add approximately 1.32 acres of land disturbance and a permit modification will be submitted to NCDEQ.

Once construction is complete, temporarily disturbed areas will be restored, including removal of excess road material, de-compaction, and rock removal in agricultural areas, and returned to their approximate pre-construction contours. Exposed soils at the Site will be stabilized by seeding, mulching, and/or plantings.

2.2 LAND SURFACE CLEARING AND GRADING PLAN

O&M Building, access road and parking construction will require additional clearing or disturbance of approximately 1.32 acres. Most of the intended disturbance is expected to occur in previously-disturbed agricultural lands. Existing trees will be protected, to the extent possible. The total construction area under Project ID: Curri-2021-013 is 778.0 acres.

Areas that require grading are expected to be freed from irregular surface changes, smoothed, compacted, and sloped to drain. Where concrete slabs are to be installed, final earth grade will be sloped away to maintain proper drainage. Embankment slopes shall be protected against rutting and scouring during construction in a manner similar to that

required for excavation slopes. Site grading will be compatible with the general topography for the area. As described in Section 2.7, proper erosion and sediment controls (E&SC) will be employed in all disturbed areas.

2.3 ENERGY, WATER, AND MATERIAL NEEDS

Gasoline and diesel fuel are expected to provide the energy needs to equipment and vehicles during construction. Fuel will be properly stored while onsite. Contractors are expected to utilize temporary fuel tanks (stored within proper secondary containment) within the laydown yards for truck refueling during the construction phase.

Temporary power may be required during construction. If construction trailers will require power, temporary service will be obtained from the local electric service provider. Other sources of power during construction include portable generators to be deployed as needed.

The majority of water use during construction will likely be for dust suppression, although another suppressant, such as calcium carbonate, may be used instead of water. If water-based suppression techniques are used, the suppression methods will limit the amount of water that leaves the site as runoff. It is anticipated that dust suppression will be needed throughout the duration of construction activities. Measurable quantities of wastewater will not be discharged from the Facility during construction, as temporary restroom facilities will be maintained and removed from the site at the completion of construction activities.

The primary materials needed for site development include:

First Solar, Inc. (First Solar) panels:

- Series 4TM PV Modules, and
- Series 6TM PV Modules;
- Steel piles to support the panels;
- Single axis tracker systems;
- Toshiba Mitsubishi-Electric Industrial Systems Corporation's (TMEIC) Solar Ware inverters (or similar);
- Overhead/underground cables; and
- Material for construction of the Substation, Switchyard, [and O&M Building.](#)

2.4 FENCING AND LIGHTING PLANS

Proposed security fencing during construction will be chain link fence set back at least 150 feet from all North Carolina Department of Transportation (NCDOT) non-major arterial street rights-of-way (ROWs) and property lines in accordance with UDO § 4.2.3.K(3) of the UDO. As described in UDO § 5.2.6, a Type D opaque buffer will be installed for the constructed Facility in accordance with UDO § 4.2.3.K(6).

[An O&M Building is anticipated for the Site, and](#) lighting will be implemented in compliance with UDO § 5.4. Security and maintenance lighting is anticipated for the [O&M Building.](#)

substation, and inverter locations. The exterior lights will comply with illumination requirements, unless required for security or emergency purposes.

2.6 CONSTRUCTION WORK FORCE AND TIMEFRAME

Approximately 200 contracted workers may be present while constructing the Facility. Construction is anticipated to take 12 months, during which time contracted workers will stimulate the local economy. Construction is anticipated to proceed in the following sequence, with the potential for multiple activities to be performed concurrently:

- Site security;
- Installation of proper E&SC measures;
- Site clearing and grading;
- Access road construction;
- Buffer/screening installation;
- Grading and drainage;
- Pile foundation installation;
- PV module installation;
- Installation of the electrical collection system;
- Installation of inverters;
- Substation construction;
- Switchyard construction;
- [O&M Building construction](#);
- Pollinator habitat installation and site revegetation; and,
- Facility commissioning and energization.

3.0 OPERATION PLAN

3.1 MAINTENANCE ACITIVIES AND SCHEDULE

All critical Facility systems and sub-systems will be properly maintained and will include a scheduled preventative maintenance regimen. Maintenance activities will also include routine equipment repair and responses to unplanned outages.

Facility staff will receive continuous site monitoring and remote control responses from the remote operations center, [and the On-Site O&M Building](#). In addition, staff will receive

continuous predictive equipment health analytics algorithms and automated performance calculations.

On a monthly basis, a safety audit of the Facility and grounds will be performed and will include review of fencing, walkways, fire extinguishers, lighting, and eyewash stations. Staff will perform environmental inspections of any oil containing structures, site vegetation, and drainage in compliance with SWP3 and/or SPCC requirements. All Facility solar equipment will be visually inspected, and the weather station will be inspected and cleaned. Staff will receive remote data validation and performance engineering reviews and analyses.

The annual maintenance plan includes regularly scheduled visual, mechanical, and electrical maintenance activities and is intended to optimize Facility performance and protection. Activities include maintenance of equipment and systems such as: Gen-tie System; Switchyard; Transformers; Breakers; Batteries; Information Technology; Network and Communication Systems; Solar Panels and their Transformers; Inverters; Auxiliary Systems and Sensors, including Meteorological Gauges and Sensors; and Health and Safety Systems (e.g., eyewash stations, etc).

4.9 WATER MANAGEMENT

The Project Area is located in an agricultural area with extensive modified drainage networks and a high- water table. Jurisdictional aquatic features, existing floodplains, and canals will be avoided and protected using appropriate setbacks and BMPs. Prior to Site disturbance, a two-dimensional hydrologic and hydraulic (H&H) model of the Site will be created to simulate rainfall runoff flow, for both pre- and post-development conditions. The results of the drainage modeling and flow analysis will identify the necessary drainage basin size, required sedimentation basin volume, and outfall flow rate and velocity.

Methods will be employed to reduce runoff and water quality impacts including employing BMPs where necessary. Sedimentation controls and BMPs will be inspected throughout the construction process. Construction and operations SWP3s and a Major Stormwater Plan will be developed and implemented at the Facility. Small agricultural ditches within the former fields may be modified, following USACE approval. Setbacks from the flood zone, canals, and other jurisdictional WOUS will be maintained. The drainage ditches and canals adjoining the Site will be maintained to keep the ditches free and clear of drainage impediments.

The proposed Facility will not result in wide-scale conversion of land to impervious surfaces. While PV panels themselves are impervious, they are disconnected from the ground surface so rain can run off the panel and fall onto the pervious underlying surface. In fact, NCDEQ's stormwater design manual states that solar panels associated with ground-mounted solar farms are considered pervious surfaces if configured with the recommendations in the manual, which the Facility will be. The collection substation, [O&M Building, O&M related parking](#), and access roads are the only source of impervious surfaces

within the Facility and are anticipated to generate minimal runoff. Therefore, no significant changes to the rate, make-up, or volume of stormwater runoff are anticipated.



Exhibit 4

Community Meeting Summary

Summary of Community Meeting – O&M Building for Oak Trail Solar, LLC

A community meeting was held at the event venue at Eagle Creek on Wednesday, March 15, 2023 from 6 to 8 PM to present the proposed addition of an operations and maintenance (O&M) building to the Oak Trail Solar Project, receive feedback from community stakeholders and attendees, and satisfy Step 2 of the Special Use Permit review process. A list of attendees and a summary of comments are provided below.

Attendees	Affiliation
Carol Andrews*	Community Stakeholder
Cory Arnold	Community Stakeholder
Doug Cowan	Community Stakeholder
Matt Crook	LRE Representative
Tom Evans*	Community Stakeholder
Owen Etheridge	County Representative
Tammy Glave	County Representative
Richard Harmon	LRE Representative
Mark Hoar	Community Stakeholder
Debbie Ivarson	Community Stakeholder
Joan Ivarson	Community Stakeholder
Robert Kelly	Community Stakeholder
Juanita Krause	County Representative
Melanie Mallard	Community Stakeholder
Jason Martinson	LRE Representative
Merrick Parrott	LRE Representative
JoAnn Stich	Community Stakeholder
Nannie Stempel	Community Stakeholder
Brad Thompson	LRE Representative
Kevin Thornton	LRE Representative
Bret Washburn	Community Stakeholder
Lisa Washburn	Community Stakeholder

*Names transcribed from the written sign-in sheet and spelling may be incorrect.

Feedback

Comments raised by attendees during the meeting include:

O&M Building:

- Questions about O&M building location
- Questions about what will be housed in O&M building

Solar Energy Facility Construction:

- Questions about construction traffic impacts and patterns
- Comments about muddy conditions during construction
- Comments about dusty conditions during construction
- Comments about worn out grass at turn-in/corner of Puddin Ridge Road
- Questions about construction stormwater measures
- Questions about ditch maintenance and water retention
- Questions about location selection process for utility switchyard
- Comments about view of utility switchyard from home
- Questions about utility switchyard retention pond and potential for mosquitos
- Questions about availability of soil from retention pond excavation
- Questions about local tax and charity contributions

SIGN-IN SHEET

Oak Trail Solar O&M Bldg. Public Information Meeting

March 15, 2023



Name	Address	Email/Phone
Nannie Strempel	176 Providence Dr Moyock, NC	strempe1@gmail.com 757-325-0916
Robert Kelly	177 Oxford Rd Moyock, NC	robertshane.kelly@gmail.com
Cory Arnold	246 Oxford Road Moyock, NC 27958	cory.g.arnold@gmail.com
Dobbie Ivarson Joan Ivarson	413 Green Lake Rd. Moyock, NC 27958	Rattybear@aol.com
Bret + Lisa Washburn	260 Oxford Rd Moyock, NC 27958	lwashburn10@verizon.net
Tammy Glase	Plus Staff	

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SIGN-IN SHEET

Oak Trail Solar O&M Bldg. Public Information Meeting

March 15, 2023



Name	Address	Email/Phone
Melanie Malleld		
Cary A. Andrews		
Justin	312 Sunny Lake	
Tom Erace		
Douglas Cowan	308 SUNNY LAKE RD.	