

NSF KIRKWOOD SOLAR PROJECT

TOWN OF KIRKWOOD, 149 QUILTY HILL ROAD &
165 FOLEY ROAD, BROOME COUNTY, NY
22.5 MW DC RATED SOLAR ELECTRIC SYSTEM

PLOT DATE: 3/26/2025 12:25 PM

DATE	REVISION DESCRIPTION	PM	ENC	CNC	GB	JMP
01/03/25	FOR COMMENT					
03/26/25	FOR COMMENT					



Tectonic
Tectonic Engineering Consultants, Geologists & Land Surveyors, D.P.C.
1241 UNIVERSITY AVENUE, ROCHESTER, NY 14607
P.O. Box 37 1st Floor Phone: (585) 446-4931
Fax: (585) 446-4931
www.tectonicengineering.com

NORBUT SOLAR FARMS

DEVELOPER:
NORBUT SOLAR FARMS, LLC
1241 UNIVERSITY AVENUE
ROCHESTER, NY 14607
(585) 587-2273

PROJECT #
12097.006

PROJECT NAME:
NSF KIRKWOOD SOLAR PROJECT
TOWN OF KIRKWOOD
BROOME COUNTY, NY

SHEET NAME:
TITLE SHEET

DRAWING #
T1

GENERAL NOTES

- AS CONTAINED HEREIN, CONTRACTOR IS ASSUMED TO BE NORBUT SOLAR FARMS, LLC. AND "SUBCONTRACTOR" IS NORBUT SOLAR FARMS, LLC'S INSTALLATION SUBCONTRACTOR.
- THESE NOTES SET MINIMUM TECHNICAL STANDARDS FOR CONSTRUCTION. THE DRAWINGS GOVERN OVER THESE NOTES TO THE EXTENT SHOWN.
- ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE FOLLOWING: LOCAL BUILDING CODE, LOCAL ELECTRICAL CODE, ANY OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK AND THOSE CODES AND STANDARDS LISTED IN THESE DRAWINGS AND IN THE SUBCONTRACTOR AGREEMENT.
- COORDINATE THESE DRAWINGS WITH SPECIFICATIONS AND MANUFACTURER INSTALLATION AND OPERATION MANUALS AND NOTIFY NORBUT SOLAR FARMS, LLC. OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK.
- DRAWINGS HAVE BEEN DETAILED IN COMPLIANCE WITH U.L. LISTING REQUIREMENTS AND THE BUILDING CODE FOR THE MATERIALS SPECIFIED. IF AN ALTERNATIVE OR SUBSTITUTED MATERIAL IS ACCEPTED AS AN EQUAL BY NORBUT SOLAR FARMS LLC., THE SUBCONTRACTOR WILL ASSUME THE RESPONSIBILITY FOR WHATEVER CONSTRUCTION MODIFICATION AND/OR ADDITIONAL COST THAT IS REQUIRED BY REASON OF THIS ACCEPTANCE.
- PRIOR TO THE COMMENCEMENT OF ANY WORK, EACH TRADE SHALL VERIFY EXISTING CONDITIONS AND NOTIFY NORBUT SOLAR FARMS, LLC. OF ANY DISCREPANCIES TO THAT WHICH IS SHOWN IN THESE DRAWINGS, INCLUDING BUT NOT LIMITED TO DIMENSIONS OF THE WORK AREA, STRUCTURE, EXISTING ELECTRICAL SERVICE, CONDUIT PATHS, OBSTRUCTIONS, ACCESSIBILITY ISSUES, AND WORKING CLEARANCES. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE SUBCONTRACTOR AT HIS OWN EXPENSE.
- SUBCONTRACTOR INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO NORBUT SOLAR FARMS, LLC. FOR APPROVAL PRIOR TO MAKING ANY CHANGES. APPROVED CHANGES REQUIRE A DRAWING REVISION TO MAINTAIN CONTROL OVER THE APPROVED DESIGN. DEVIATION FROM THESE PLANS PRIOR TO NORBUT SOLAR FARMS, LLC. APPROVAL PLACES ALL LIABILITY ON THE SUBCONTRACTOR.
- UNLESS INDICATED AS EXISTING (E), ALL PROPOSED MATERIALS AND EQUIPMENT ARE NEW.
- ALL ITEMS TO BE REMOVED AND RELOCATED OR REPLACED SHALL BE HANDLED WITH PROPER CARE AND STORED IN A SAFE PLACE TO PREVENT DAMAGE, OR BE REPLACED AT THE SUBCONTRACTOR'S EXPENSE.
- ALL EQUIPMENT SHALL BE MOUNTED AS SHOWN, WHERE DETAILS ARE NOT PROVIDED, THE SUBCONTRACTOR SHALL USE DILIGENT EFFORTS TO MOUNT EQUIPMENT SUCH THAT IT WILL BE CLEAN, LEVEL AND SOLID.
- ALL SURFACES SHALL BE PATCHED AND PAINTED AROUND NEW DEVICES AND EQUIPMENT TO MATCH EXISTING FINISHES.
- ANY METAL SHAVINGS RESULTING FROM SITE WORK SHALL BE CLEANED FROM ROOF SURFACES, ENCLOSURES AND ANY ADDITIONAL AREAS WHERE OXIDIZED OF CONDUCTIVE METAL SHAVINGS MAY CAUSE RUST, ELECTRICAL SHORT CIRCUITS OR OTHER DAMAGE.
- NO STRUCTURAL MEMBER SHALL BE DRILLED UNLESS SPECIFICALLY AUTHORIZED BY NORBUT SOLAR FARMS, LLC.
- SUBCONTRACTOR ACKNOWLEDGES THAT THE SYSTEM AS INDICATED ON THE PLANS REQUIRES ALL COMPONENTS TO BE INSTALLED TO PROPERLY RESIST WIND LOADS, SUCH AS BALLAST, WIND DEFLECTORS, ETC. IT IS THE RESPONSIBILITY OF THE SUBCONTRACTOR TO PROVIDE TEMPORARY MEANS TO RESIST WIND LOADS FOR ALL COMPONENTS NOT YET INSTALLED DURING AND AFTER REGULAR WORKING HOURS. THIS MAY INCLUDE TEMPORARY TIE DOWNS, COVERING, BALLAST OR ANY OTHERS, DAMAGE TO ANY INSTALLED SYSTEM COMPONENT OR THE EXISTING FACILITY AS A RESULT OF THE UNFINISHED CONDITION NOT ADEQUATELY RESISTING WIND SHALL BE THE RESPONSIBILITY OF THE SUBCONTRACTOR TO REPAIR OR REPLACE AT THE SUBCONTRACTOR'S COST.
- TREES MAY GROW DURING THE LIFE OF THE SYSTEM AND IMPACT THE PRODUCTION.

APPLICABLE CODES AND STANDARDS

- 2017 NATIONAL ELECTRICAL CODE
- 2018 INTERNATIONAL BUILDING CODE
- 2020 NEW YORK STATE UNIFORM CODE SUPPLEMENT
- CONSTRUCTION SHALL CONFORM TO THE TOWN OF KIRKWOOD MUNICIPAL CODE, ARTICLE VII, LOCAL LAW NO. 6 OF THE YEAR 2022; AS WELL AS ANY OTHER APPLICABLE CHAPTERS OF THE MUNICIPAL CODE.
- NEW YORK STATE STORMWATER DESIGN MANUAL, 2024
- NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL, 2016

PROJECT SCOPE

THIS PROJECT CONSISTS OF THE INSTALLATION OF SOLAR MODULES PER THE SYSTEM DESCRIPTION, BELOW. THE MODULES WILL BE INSTALLED ON A GROUND MOUNTED RACKING SYSTEM. THE MODULES WILL BE WIRED IN SERIES STRINGS AND CONNECTED IN PARALLEL TO THE INVERTERS, WHICH CONVERT THE PHOTOVOLTAIC OUTPUT POWER FROM DC TO AC. THE SOLAR ELECTRIC SYSTEM WILL BE INTERCONNECTED WITH THE EXISTING SITE ELECTRICAL SYSTEM IN ACCORDANCE WITH THE APPLICABLE ELECTRIC CODE AND UTILITY REQUIREMENTS.

SYSTEM DESCRIPTION

SYSTEM SIZE (DC STC)	22.5 MW	SYSTEM SIZE (AC)	15.0 MW
MODULES	545W BI-FACIAL ZNSHINESOLAR ZXM7-SPLDD144 OR APPROVED EQUAL	STC RATED OUTPUT	545W
MODULE TOTAL	41,340 PANELS	FRAMES COUNT	6,360 FRAMES
RACKING	NEVADOS ALL TERRAIN TRACKER (OR APPROVED EQUAL)		
INVERTER	SUNGROW SG-3425UD-MV-US OR DERATED TO 2500KVA OUTPUT		
AZIMUTH	±180°, 0°		

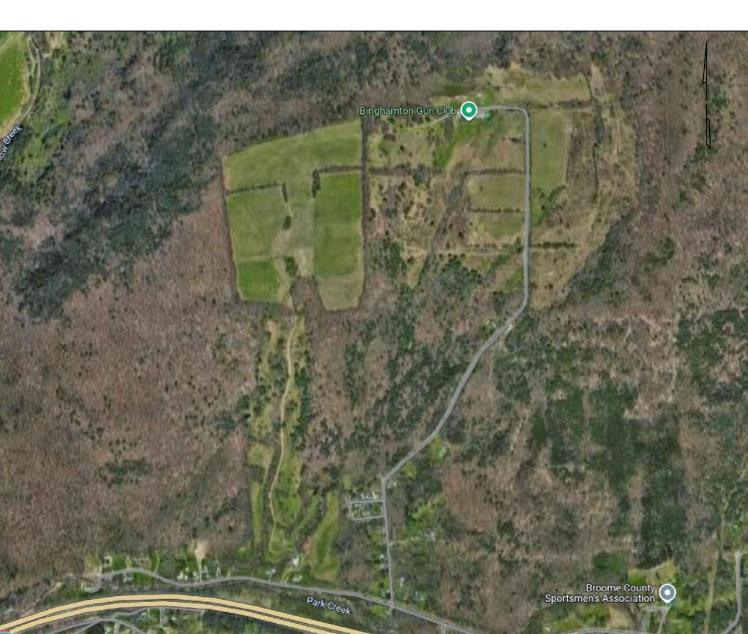
PROJECT DIRECTORY

AUTHORITY HAVING JURISDICTION TOWN OF KIRKWOOD 70 CRESSENT DRIVE KIRKWOOD, NY 13795	PROJECT MANAGER FIRM: NORBUT SOLAR FARMS, LLC CONTACT: STEVE SAUNDERS PHONE: (585) 446-3218
UTILITY NYSEG, ZONE C	CIVIL ENGINEER FIRM: TECTONIC ENGINEERING CONSULTANTS CONTACT: J. MARK PRIVETTE, P.E. PHONE: (845) 534-5959
DEVELOPER NORBUT SOLAR FARMS, LLC 1242 UNIVERSITY AVE ROCHESTER, NY 14607	PROJECT SURVEYOR FIRM: JHA COMPANIES CONTACT: CHRISTOPHER T. OLENIACZ, PLS PHONE: (844) 542-4757

LOCATION MAP



AERIAL VIEW



GENERAL ABBREVIATIONS

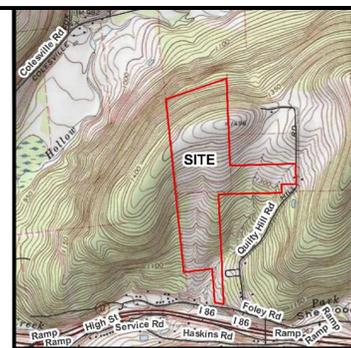
(E)	EXISTING	MOD	SOLAR MODULE
AHJ	AUTHORITY HAVING JURISDICTION	NA	NORTH-SOUTH
AL	ALUMINUM	NTS	NOT TO SCALE
APPROX	APPROXIMATE	OAE	OR APPROVED EQUAL
ARY	ARRAY	OC	ON CENTER
BLDG	BUILDING	OD	OUTSIDE DIAMETER
AES	AES CLEAN ENERGY	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CL	CENTERLINE	PV	PHOTOVOLTAIC
DAS	DATA ACQUISITION SYSTEM	PVC	POLY VINYL CHLORIDE
DIA	DIAMETER	SCH	SCHEDULE
DO	DITTO	SS	STAINLESS STEEL
EW	EAST-WEST	SSS	SOLAR SUPPORT STRUCTURE
FBO	FURNISHED BY OTHERS	STC	STANDARD TEST CONDITIONS
FF	FORWARD FACING	TBD	TO BE DETERMINED
GALV	GALVANIZED	TP	TAMPER PROOF
HDG	HOT DIP GALVANIZED	TYP	TYPICAL
HVAC	HEATING VENTILATION AND AIR CONDITIONING	UON	UNLESS OTHERWISE NOTED
ID	INSIDE DIAMETER	VIF	VERIFIED IN FIELD
MFR	MANUFACTURER	WP	WEATHER PROOF

DRAWING LIST

SHEET NUMBER	SHEET TITLE
T-1	TITLE SHEET
GN-1	GENERAL CONSTRUCTION NOTES
SRV-1	PROPERTY SURVEY (BY OTHERS)
SRV-2	PROPERTY SURVEY (BY OTHERS)
SRV-3	PROPERTY SURVEY (BY OTHERS)
C-1	PROJECT AREA TOPOGRAPHY & SOILS
C-2	LANDUSE PLAN
C-3	CLEARING PLAN
C-4A	OVERALL HORIZONTAL CONTROL / SITE LAYOUT PLAN
C-4B	ENLARGED HORIZONTAL CONTROL PLAN (NORTH)
C-4C	ENLARGED HORIZONTAL CONTROL PLAN (CENTRAL)
C-4D	ENLARGED HORIZONTAL CONTROL PLAN (EAST)
C-4E	ENLARGED HORIZONTAL CONTROL PLAN (SOUTH)
C-4F	ENLARGED HORIZONTAL CONTROL PLAN (INSETS)
C-5	EROSION & SEDIMENT CONTROL PLAN
C-6A	EROSION & SEDIMENT CONTROL DETAILS
C-6B	EROSION & SEDIMENT CONTROL DETAILS
C-7	EROSION & SEDIMENT CONTROL STABILIZATION NOTES
C-8A	FENCE LAYOUT PLAN
C-8B	FENCE DETAILS
C-9	ACCESS DRIVE DETAILS
C-10	PANEL ARRAY AND TRENCHING DETAILS

LEGEND	
PROPERTY LINE	
ADJOINER PARCEL LINE	
BUILDING SETBACK LINE	
RIGHT-OF-WAY LINE	
OVERHEAD ELECTRIC	
WIRE FENCING	
STONE WALL	
CONTOUR LINE (MAJOR)	
WETLAND SETBACK	
STREAM	
WETLAND	
PROPERTY CORNER	
MONUMENT FOUND AS NOTED	
1/4" REBAR & CAP SET	
SUB DISTANCE	
RECORD DISTANCE	
UTILITY POLE	
WATER WELL	
TREE	
GREAT LOT NUMBER	
MAILBOX	

NYSPC CENTRAL ZONE
GRID NORTH
NAD 83



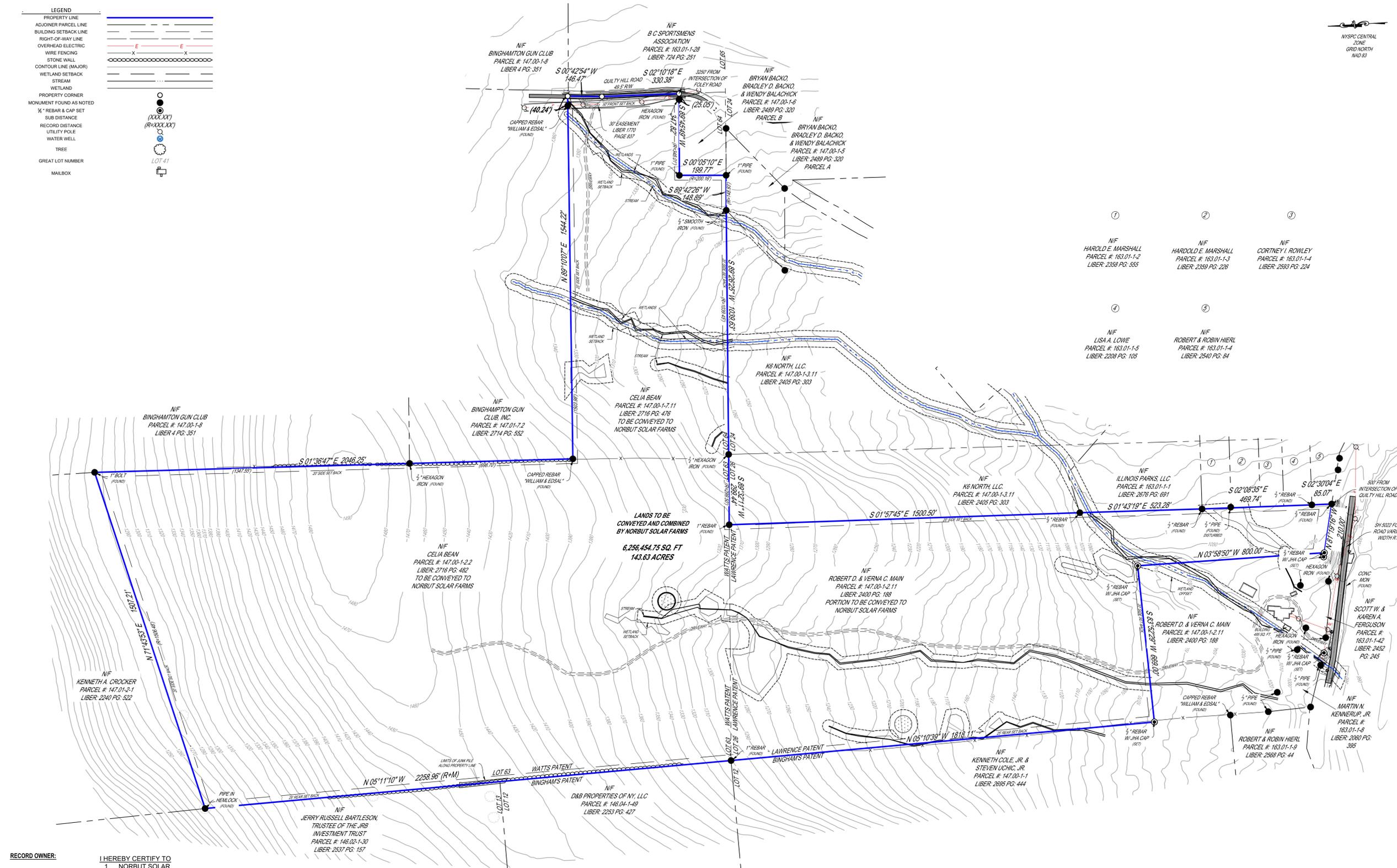
LOCATION MAP
SCALE: 1" = 2000'

NO.	DATE	ADDRESS	CLIENT	COMMENTS	UN PROPOSED ITEMS	REMOVED	INT.	CTD.
1	5/12/2023							

CALL BEFORE YOU DIG!

NEW YORK LAW REQUIRES:
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE
- STOP CALL
10 WORKING DAYS IN DESIGN STATE
- STOP CALL
New York One Call System, Inc.

SERIAL NO.



RECORD OWNER:
CELIA BEAN
97 DEWEY ROAD
BARTON, NY 13734
LIBER BOOK: 2716 PAGE: 476

I HEREBY CERTIFY TO

- NORBUT SOLAR
- QUILTY HILL ROAD, LLC

- GENERAL NOTES:**
- COPYRIGHT 2024 JHA COMPANIES ALL RIGHTS RESERVED.
 - UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.
 - ONLY BOUNDARY SURVEY MAPS WITH THE SURVEYOR'S SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE SURVEYOR'S ORIGINAL WORK AND OPINION.
 - CERTIFICATIONS OF THIS BOUNDARY SURVEY MAP SIGNIFY THAT THE MAP WAS PREPARED IN ACCORDANCE WITH THE CURRENT EXISTING CODE OF PRACTICE FOR LAND SURVEYING ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS, INC. THE CERTIFICATION IS LIMITED TO PERSONS FOR WHOM THE BOUNDARY SURVEY MAP IS PREPARED, TO THE TITLE COMPANY, TO THE GOVERNMENT AGENCY, AND TO THE LENDING INSTITUTION LISTED ON THIS BOUNDARY SURVEY MAP.
 - THE CERTIFICATIONS HEREIN ARE NOT TRANSFERABLE.
 - THE LOCATION OF UNDERGROUND IMPROVEMENTS OR ENCROACHMENTS ARE NOT ALWAYS KNOWN AND OFTEN MUST BE ESTIMATED. IF ANY UNDERGROUND IMPROVEMENTS OR ENCROACHMENTS EXIST OR ARE SHOWN, THE IMPROVEMENTS OR ENCROACHMENTS ARE NOT COVERED BY THIS CERTIFICATE.
 - ANY LOCATIONS OF UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE.
 - THIS SURVEY WAS COMPLETED WITHOUT THE BENEFIT OF A TITLE REPORT OR ABSTRACT OF TITLE.
 - THIS SURVEY DOES NOT CONSTITUTE A SUBDIVISION AS DEFINED BY THE TOWN OF KIRKWOOD SUBDIVISION REGULATIONS.
 - VERTICAL DATUM IS REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD83).
 - TOPOGRAPHIC CONTOURS ARE BASED ON LIDAR SURVEY PROVIDED BY BROOME COUNTY GIS AT 2 INTERVALS.
 - ROW FOR QUILTY HILL ROAD IS 48.5' WIDE.
 - FIELD SURVEY COMPLETED 06/05/2023 - 06/14/2023.
 - THIS PROJECT WAS SCALED FROM GRID DISTANCES TO GROUND DISTANCES BY A COMBINED SCALE FACTOR OF 1.00006623321423. ALL DISTANCES SHOWN ARE TRUE GROUND DISTANCES.
 - WETLAND SETBACK SHOWN HEREON ARE TWENTY-FIVE (25) FEET.
 - THIS PLAN DOES NOT REPRESENT THE CURRENT STATUS OF THE EXISTING TAX PARCELS. THIS PLAN SHALL NOT BE FILED OR BE CONSIDERED AS A FINAL SUBDIVISION PLAN.

- MAP REFERENCES:**
- MAP ENTITLED "SURVEY FOR BRUCE E. KIBBLER, QUILTY HILL ROAD, TOWN OF KIRKWOOD, BROOME COUNTY, NEW YORK" PREPARED BY RONALD C. SCHISSL, S.S., DATED JULY 1, 1987.
 - MAP ENTITLED "SURVEY FOR BRUCE E. KIBBLER, QUILTY HILL ROAD, TOWN OF KIRKWOOD, BROOME COUNTY, NEW YORK" PREPARED BY RONALD C. SCHISSL, S.S., DATED AUGUST 20, 1988.
 - MAP ENTITLED "SURVEY FOR DEBRA A. DEPEW, QUILTY HILL ROAD, TOWN OF KIRKWOOD, BROOME COUNTY, NEW YORK" PREPARED BY RONALD C. SCHISSL, S.S., DATED SEPTEMBER 18, 1990, UPDATED APRIL 12, 1991.
 - MAP ENTITLED "SURVEY FOR DONALD & CHERYL MARSHALL, QUILTY HILL ROAD, TOWN OF KIRKWOOD, BROOME COUNTY, NEW YORK" PREPARED BY SOUTHERN TIER SURVEYING, LLP, DATED NOVEMBER 3, 2004, UPDATED OCTOBER 10, 2005.
 - MAP ENTITLED "SURVEY FOR CHRIS R. & MARGO R. KIBBLER, FOLEY ROAD & QUILTY HILL ROAD, TOWN OF KIRKWOOD, BROOME COUNTY, NEW YORK" PREPARED BY SOUTHERN TIER SURVEYING, LLP, DATED MARCH 29, 2007.
 - MAP ENTITLED "SURVEY FOR THE ESTATE OF DOUGLAS N. HARRIS, LOCATED ON QUILTY HILL ROAD, TOWN OF KIRKWOOD, BROOME COUNTY, NEW YORK" PREPARED BY WILLIAMS & EDWARDS LAND SURVEYORS, P.C., DATED JANUARY 25, 2023. RECORDED IN THE BROOME COUNTY CLERK'S OFFICE ATTACHED TO DEED BOOK: 2716 PAGE: 476.
 - MAP ENTITLED "PLANS FOR IMPROVING WITH FEDERAL AID A PORTION OF THE BINGHAMPTON WINDSOR, PART 2, STATE HIGHWAY NO. 5022 BETWEEN STATION 149+00 BL AND STATION 4+20 BL IN THE TOWN OF KIRKWOOD, BROOME COUNTY, NEW YORK" PREPARED BY STATE OF NEW YORK DEPARTMENT OF PUBLIC WORKS DIVISION OF CONSTRUCTION, DATED DECEMBER 6-7, 1961. FILED ON JANUARY 25, 1962 WITH THE STATE OF NEW YORK DEPARTMENT OF PUBLIC WORKS, AS 4-A.R.C. 62-1.

- N.Y.S. D.O.T. MAP REFERENCES FOR BOUNDARY OF SH5022:**
- | | |
|-------------------|--------------------|
| 1. MAP NO. 101 | 10. MAP NO. 109 |
| 2. MAP NO. 101B-1 | 11. MAP NO. 110 |
| 3. MAP NO. 102 | 12. MAP NO. 111 |
| 4. MAP NO. 103 | 13. MAP NO. 112 |
| 5. MAP NO. 104 | 14. MAP NO. 113 |
| 6. MAP NO. 105 | 15. MAP NO. 114 |
| 7. MAP NO. 106 | 16. MAP NO. 115 |
| 8. MAP NO. 107 | 17. MAP NO. 115B-1 |
| 9. MAP NO. 108 | 18. MAP NO. 116 |

MAP INTENT

THIS PLAN IS INTENDED TO SHOW NORBUT SOLAR FARMS FINAL INTENT ONCE LANDS ARE CONVEYED FROM CELIA BEAN AND A PORTION OF LAND FROM ROBERT D. & VERNA C. MAIN. THIS PLAN REPRESENTS THE COMBINATION OF THREE SEPARATE TAX PARCELS INTO ONE CONTIGUOUS PARCEL BEING 143.63 ACRES.



JHA SURVEYING
ENGINEERING
ENVIRONMENTAL
ARCHITECTURE

www.jhacompanies.com

844-542-4757
466 SOUTH MAIN STREET
MONTROSE, PA 18801
MD • NY • OH • PA • VA • WV

PROJECT ID:	2023-0642	DRAWN:	BWL
DATE:	2024-06-11	DESIGN:	CTO
SCALE:	1"=200'	CHECKED:	CTO

COMBINATION OF LANDS FOR NORBUT SOLAR FARMS
LOCATED IN
TOWN OF KIRKWOOD
BROOME COUNTY,
NEW YORK

TITLE:
PRELIMINARY SKETCH PLAN

PLAN STATUS:
PRELIMINARY PLAN

SHEET NO.
1

Mar 12, 2025 2:09pm C:\Users\jha\OneDrive - JHA Companies\Documents\2023\2023-0642_Quilty Hill Solar Farms\CAD\Sheet Files\FINAL COMBINATION (QUILTY HILL) 2426.dwg
Layout: 1420A-1-11

THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF JHA COMPANIES

